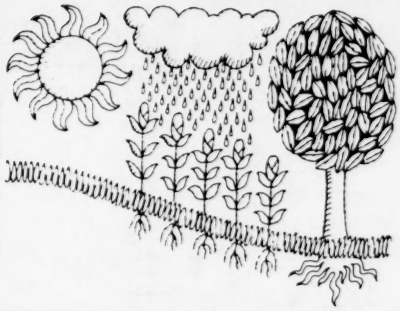

# WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
Environmental Data and Information Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE
Economics, Statistics, and Cooperatives Service

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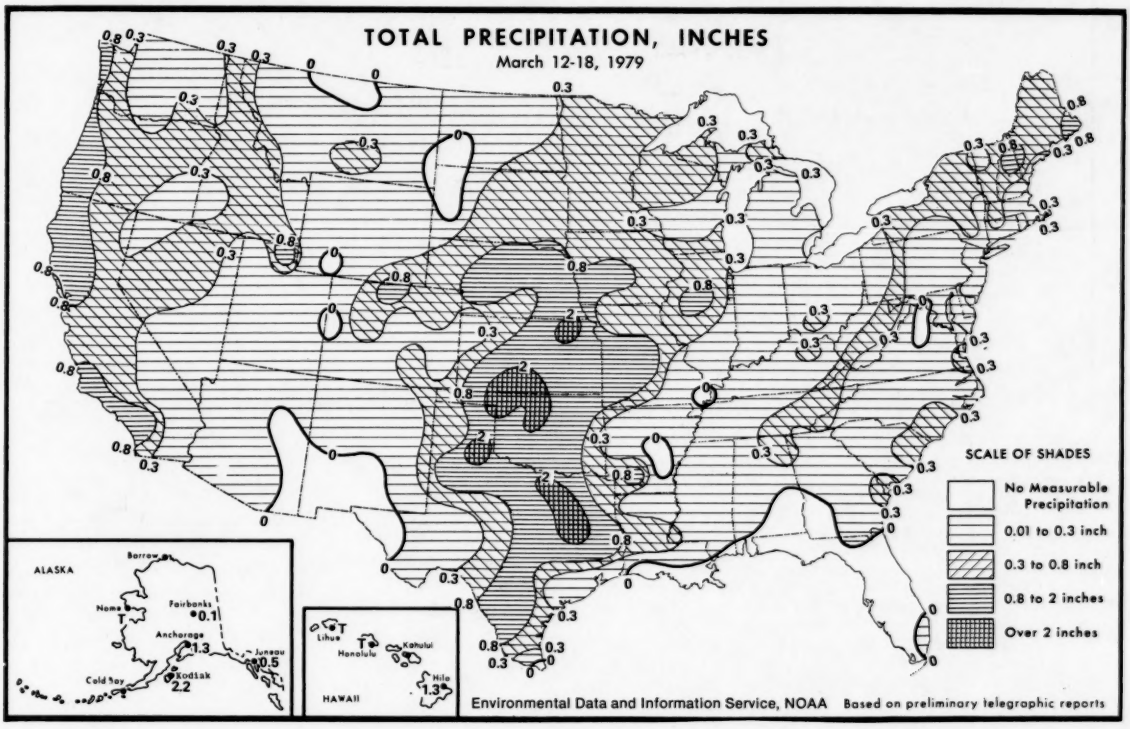


## National Weather Summary

March 12 - 18

HIGHLIGHTS: The major precipitation areas were the West Coast and Great Plains. Significant rain dampened most of the coastal areas into the central Plateau Region. The moisture added to snowpack accumulations in California's Sierra Mountains.

Widespread showers and thunderstorms covered an area from Texas to Nebraska. Most of the Nation's winter wheat area was helped by the timely moisture. Melting snows along the northern reaches of the Mississippi River has swelled waterways in the midlands.

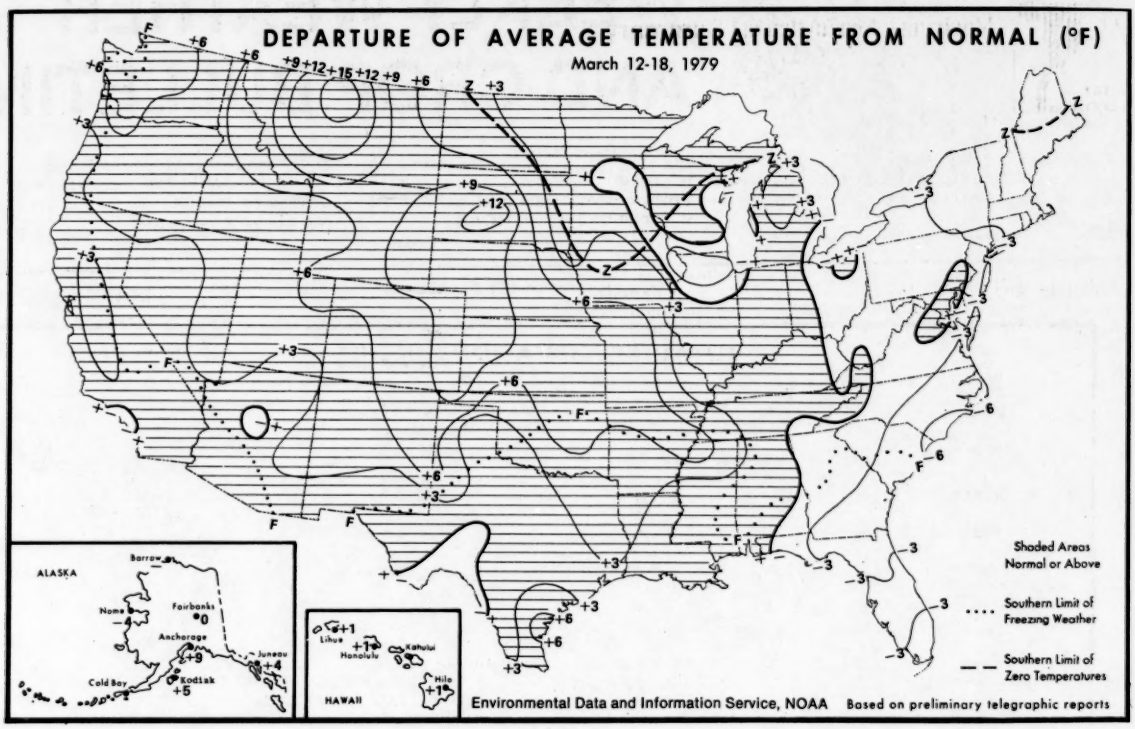
Temperatures averaged above normal in most sections west of the Mississippi River, and neared normal in much of the remainder of the country. Readings rose 10 to 15 degrees warmer than normal in the upper half of the Rockies.

On Monday, the heaviest precipitation fell in New York State, where Syracuse collected 5 inches. Elsewhere, a cold front stretched across the northern Plains producing snow flurries in Montana and high winds in North Dakota. Light snow also extended from Ohio through the northern Appalachians.

Light showers dotted the Kansas/Missouri border area and the California coast; San Bernardino, east of Los Angeles, weathered small hail.

High winds, blowing snow, and cold temperatures surged into the northern tier of States on Tuesday. By contrast, temperatures warmed considerably in the Great Lakes region. Alpena, northern Michigan, notched a record high of 53°, and Chicago, at 52°, also reached a record mark.

The southern half of California and Arizona were dampened by scattered showers. Los Angeles and Fresno managed about one-half inch; small hail pelted Phoenix.




Readings rose along the northern West Coast States; Seattle hit a record high 70°.

On Wednesday, a fast-moving cold front carried rain to the Nation's eastern third. Up to a half-inch fell on points from Georgia to Maine.

Late in the day, snow began in States bordering the Great Lakes and northern New England, accompanied by high winds with gusts reaching 50 mph.

Meantime, snowmelt and ice jams forced rivers past flood stage from the Plains to the Tennessee Valley. The Mississippi River topped flood stage by 12 feet at Cairo, southern Illinois, and 3½ feet at Memphis. Agricultural lowlands received most of the flooding along the lower Mississippi River.

Rainfall was generally light along the Pacific Coastal States; stations in Washington and Oregon noted one-third inch. Taft, at the southern tip of California's San Joaquin Valley, measured an inch of rain.

Showers moved through Texas and Oklahoma on Thursday, with about an inch marking the heaviest total at San Antonio. Central Texas, including San Antonio, was hit by hail as well.

The West Coast marked precipitation along most of its length. Up to an inch covered some northern California areas. California's Sequoia National Park reported 8 inches of snow, and a tornado touched down 8 miles southeast of Salem, Oreg.

While the southern half of the Mississippi Valley suffered some continuing overflow, the northern half returned to wintry weather. A sampling of record cold temperatures showed -5° at Mason City, north central Iowa, and 10° at Ottumwa, in the southern portion of the State. Rockford, northern Illinois, chalked up a record 4°, and also scored its record 105th consecutive day with snow on the ground; that topped by far last year's former record of 91 days. Charleston, W.Va., with 53.6 inches of snow so far this season, weathered its second snowiest winter.

Rain persisted along the West Coast and in Texas on Friday. In California, Oakland gathered a half-inch, and Santa Barbara was dampened by 1.02 in. Edging inland, snow began to fall in the Sierra Mountains.

In East Texas, Lufkin got more than an inch of rain, and College Station received nearly an inch and a half.

Temperatures dipped sharply from the Ohio Valley to the Atlantic Seaboard. Richmond, Va., and the Baltimore/Washington Airport plunged to record lows of 18°; Atlantic City, N.J., reported a record-tying 17°.

On Saturday, clouds still covered California and the southern Plains. About a half-inch moistened areas north of Los Angeles, and San Diego posted 1.12 inches. Snow moved into the northern Rockies; Ogden, Utah, was blanketed by a half-foot.

In the Plains, Salina, central Kansas, chalked up .70 inch. However, the severest weather struck the Texas Panhandle. Several points noted heavy hail, and Silverton sighted a tornado.

On Sunday, severe weather continued to plague parts of Texas. Hail and a tornado again struck the panhandle. Northern Oklahoma's Enid and Gage accumulated more than an inch and a half of rain. The weekend rains provided a welcome boost to the Plains winter wheat area.

Points in Kansas received an inch or more, but the moisture turned to snow over western Nebraska and westward into the Rockies. More than a foot of snow covered southeastern Wyoming and much of the Nebraska Panhandle.

The northern Plains had brighter news. Sioux Falls, southeastern South Dakota, officially reported no snow on the ground after a 105-day mantle.

South Bend, northern Indiana, tallied a record high temperature of 71°.

## National Agricultural Summary

March 12 - 18

HIGHLIGHTS: Above-normal temperatures and light amounts of precipitation allowed minimal field activities in areas as far north as Kentucky. However, fields generally remain too wet for any major land preparation. Time suitable for fieldwork through these southern areas averaged 2 to 4 days. Soil moisture was rated adequate to surplus except in some areas of Colorado and Kansas where moisture was short. Snow still covered areas of northern South Dakota, Iowa, Michigan, and Illinois and points northward. New snowcover accumulated towards the end of the week in many areas of Colorado, Wyoming, western Nebraska, and western South Dakota. Winter wheat condition was rated as fair to good with wind damage being only minimal. Pasture conditions scored fair to poor with some East Coast States reporting fair to good conditions. Many areas reported pastures as starting to green.

Deciduous fruit orchard maintenance moved actively with pruning near completion and spraying increasing. Vegetable fieldwork still centered around the southern parts of the Nation. However, some minor vegetable activity was developing in more northerly areas.

SMALL GRAINS: Winter wheat rated fair to good with only minimal wind damage reported. Kansas reported oats seeding at 35 percent complete and barley seeding at 10 percent complete. Oklahoma suffered some insect damage to winter wheat and some freeze damage to oats. New Mexico farmers stopped grazing on wheat and barley fields as the crop developed.

OTHER CROPS: Corn planting was active where conditions permitted. Texas reported plantings at 13 percent complete, compared with 15 percent last year, and the 13 percent average. Mississippi reported corn planting at 31 percent, compared with 29 percent last year. Louisiana noted rice and potato plantings well underway. Virginia tobacco bed seedings were 50 percent complete. In Mississippi, watermelon seedings were nearly finished. Cotton harvest wound down in Oklahoma and Texas. Planting of the new cotton crop was 6 percent complete in Texas---about the same as last year and the average. Sorghum planting in Texas was 20 percent complete, compared with 23 percent last year and the 27 percent average. Sugarbeet planting got underway in the south coastal area of California. Florida sugarcane harvest neared completion.

FRUITS AND NUTS: In California, bloom for most deciduous fruit crops neared completion. Lemon, Navel orange, and Minneola tangerine packing continued.

Almond trees were leafing out, while walnuts broke dormancy.

Arizona grapevines showed good growth. Deciduous fruit trees reached full bloom in the Salt River Valley. Citrus harvests steadily progressed. Lemons tapered off. Valencia harvest increased while grapefruit harvest held steady. New growth was abundant in all citrus groves.

Texas peach trees along the upper Gulf Coast reached full bloom with some trees approaching petal fall. Pecan trees in south and south central Texas were budding out. In South Carolina, early peach varieties started blooming---slightly later than normal.

Florida citrus groves condition rated as excellent with moisture adequate. Bloom progressed with warmer weather needed. Early and mid-orange harvests slowed as supplies were running out. Supplies of strawberries increased considerably. The strawberry crop outlook was rated good.

In Washington, raspberry planting stock was dug and neared the halfway point. Berries broke dormancy in western areas. In eastern Washington, pear pests appeared in some orchards. Spraying as well as pruning and brush removal continues.

VEGETABLES: In California, harvest was active on asparagus, carrots, and winter spinach. Lettuce harvest wound down in the Imperial Valley and increased in Palo Verde. Tomato plantings made good progress.

In Arizona, harvest of miscellaneous vegetables advanced actively.

In the lower Rio Grande Valley of Texas, onions made good growth and supplies of carrots, cabbage, and lettuce moved to market. In the Coastal Bend area, the spinach harvest was interrupted by rains. In the Laredo area, carrot and cabbage harvests continued. Spinach harvest advanced in the Eagle Pass area. In the San Antonio area, spinach and carrot harvests were active and early cabbage was up to good stand. The Trans-Pecos area reported active onion planting.

Florida shipments increased on snap beans, celery, chinese cabbage, cucumbers, parsley, peppers, squash, and tomatoes; shipments held steady on cabbage, carrots, cauliflower, sweetcorn, eggplant, lettuce, potatoes, and radishes. Escarole and okra supplies decreased.

PASTURE AND LIVESTOCK: Range and pastures began greening as far north as the southern Corn Belt. Oregon also reported some pasture greening. Pasture conditions rated fair to poor with some East Coast States reporting fair to good. Above-normal temperatures helped improve pastures, but generally no grazing took place except for extreme southern areas. Hay and supplemental feed supplies generally rated adequate. However, some isolated areas are beginning to become short of supplemental feed materials.

Cattle rated fair to good throughout the Nation. Calving and lambing continued actively throughout all areas. Sheep shearing also remained active. Late-season snowstorms in some western areas caused minor problems to calving and sheep shearing operations. Muddy conditions in the West continued to prevent cattle from moving on to ranges.

## Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., March 18, 1979

| States and Stations | Temperature °F Average | Temperature °F Departure | Precipitation Inches Total | Precipitation Inches Departure |
|---|---|---|---|---|
| ALA.Birmingham. . . | 54 | + 1 | .1 | - 1.3 |
| Mobile. . . . . | 60 | + 1 | T | - 1.6 |
| Montgomery. . . . | 58 | + 2 | 0 | - 1.4 |
| ALASKA.Anchorage. . | 32 | + 9 | 1.3 | + 1.2 |
| Barrow. . . . . | -- | -- | -- | -- |
| Fairbanks . . . . | 8 | 0 | .1 | 0 |
| Juneau. . . . . | 38 | + 7 | .5 | - .3 |
| Kodiak. . . . . | 37 | + 5 | 2.2 | + 1.4 |
| Nome. . . . . | 3 | - 4 | T | - .2 |
| ARIZ.Flagstaff. . . | 33 | - 1 | T | - .4 |
| Phoenix . . . . . | 61 | + 2 | .1 | - .1 |
| Tucson. . . . . | 58 | + 1 | .1 | 0 |
| Winslow . . . . . | 45 | + 1 | T | - .1 |
| Yuma. . . . . | 64 | 0 | T | - .1 |
| ARK.Fort Smith. . . | 55 | + 5 | .1 | - .7 |
| Little Rock . . . | 55 | + 5 | T | - 1.1 |
| CALIF.Bakersfield . | 59 | + 3 | .8 | + .6 |
| Eureka. . . . . | 49 | + 1 | .9 | - .2 |
| Fresno. . . . . | 57 | + 3 | .7 | + .3 |
| Los Angeles . . . | 56 | - 3 | 1.0 | + .5 |
| Red Bluff . . . . | 56 | + 3 | 1.3 | + .7 |
| San Diego . . . . | 60 | + 2 | .8 | + .4 |
| San Francisco . . | 54 | + 1 | .5 | - .1 |
| Stockton. . . . . | 56 | + 4 | .4 | 0 |
| COLO.Denver . . . . | 44 | + 8 | .3 | 0 |
| Grand Junction. . | 44 | + 3 | T | - .1 |
| Pueblo. . . . . | 46 | + 7 | .7 | + .6 |
| CONN.Bridgeport . . | 36 | - 1 | .1 | - .7 |
| Hartford. . . . . | 32 | - 3 | T | - .8 |
| D.C.Washington. . . | 46 | + 1 | T | - .8 |
| FLA.Apalachicola. . | 58 | - 2 | T | - 1.1 |
| Daytona Beach . . | 63 | - 1 | 0 | - .8 |
| Ft. Myers . . . . | 67 | - 1 | 0 | - .7 |
| Jacksonville. . . | 57 | - 4 | T | - .8 |
| Key West. . . . . | 72 | - 3 | T | - .3 |
| Lakeland. . . . . | -- | -- | -- | -- |
| Miami . . . . . | 68 | - 3 | T | - .4 |
| Orlando . . . . . | 63 | - 3 | 0 | - .8 |
| Tallahassee . . . | 56 | - 4 | 0 | - 1.4 |
| Tampa . . . . . | 65 | - 1 | 0 | - .9 |
| W.Palm Beach. . . | 67 | - 3 | .1 | - .7 |
| GA.Atlanta. . . . | 54 | + 3 | .1 | - 1.2 |
| Augusta . . . . . | 53 | - 1 | .1 | - 1.0 |
| Macon . . . . . | 55 | - 1 | T | - 1.2 |
| Savannah. . . . . | 55 | - 3 | .3 | - .8 |
| HAWAII.Hilo . . . . | 72 | + 1 | 1.3 | - 1.7 |
| Honolulu. . . . . | 74 | + 1 | T | - .8 |
| Kahului . . . . . | -- | -- | -- | -- |
| Lihue . . . . . | 73 | + 1 | T | - 1.1 |
| IDAHO.Boise . . . . | 45 | + 4 | .2 | 0 |
| Lewiston. . . . . | 47 | + 5 | .3 | + .1 |
| Pocatello . . . . | 38 | + 3 | .3 | + .1 |
| ILL.Cairo . . . . . | 49 | + 2 | 0 | - 1.1 |
| Chicago . . . . . | 33 | - 3 | .2 | - .4 |
| Moline. . . . . | 34 | - 1 | .6 | 0 |
| Peoria. . . . . | 37 | 0 | .8 | + .2 |
| Rockford. . . . . | 29 | - 4 | .4 | - .2 |
| Springfield . . . | 40 | + 1 | .4 | - .2 |
| IND.Evansville. . . | 45 | + 1 | .1 | - 1.0 |
| Ft. Wayne . . . . | 37 | + 1 | .3 | - .3 |
| Indianapolis. . . | 41 | + 2 | .1 | - .8 |
| South Bend. . . . | 37 | + 2 | .1 | - .5 |
| IOWA.Burlington . . | 40 | + 4 | .7 | + .1 |
| Des Moines. . . . | 38 | + 5 | .9 | + .4 |
| Dubuque . . . . . | 27 | - 4 | .4 | - .3 |
| Sioux City. . . . | 34 | + 2 | .7 | + .4 |
| KANS.Concordia. . . | 45 | + 7 | 1.8 | + 1.4 |
| Dodge City. . . . | 46 | + 6 | 1.3 | + 1.0 |
| Goodland. . . . . | 45 | +10 | T | - .2 |
| Topeka. . . . . | 46 | + 6 | .8 | + .3 |
| Wichita . . . . . | 49 | + 6 | 1.5 | + 1.1 |
| KY.Lexington. . . . | 44 | + 1 | .2 | - .9 |
| Louisville. . . . | 45 | + 2 | .1 | - 1.1 |
| LA.Baton Rouge. . . | 59 | 0 | .1 | - 1.0 |
| Lake Charles. . . | 62 | + 2 | T | - .8 |
| New Orleans . . . | 62 | + 2 | T | - 1.3 |
| Shreveport. . . . | 59 | + 3 | .2 | - .7 |
| MAINE.Caribou . . . | 19 | - 4 | .4 | - .1 |
| Portland. . . . . | 26 | - 5 | .1 | - .7 |
| MD.Baltimore. . . . | 42 | 0 | T | - .8 |
| MASS.Boston . . . . | 34 | - 4 | .1 | - .8 |
| Chatham . . . . . | 32 | -- | .3 | -- |
| MICH.Alpena . . . . | 29 | + 4 | .3 | - .1 |
| Detroit . . . . . | 34 | - 1 | .4 | - .2 |
| Flint . . . . . | 34 | + 2 | .2 | - .3 |
| Grand Rapids. . . | 33 | + 1 | .1 | - .5 |
| Houghton Lake . . | 29 | + 3 | T | - .4 |
| Lansing . . . . . | 35 | + 3 | .1 | - .4 |
| Marquette . . . . | 24 | + 3 | .2 | - .3 |
| Muskegon. . . . . | 30 | - 2 | .3 | - .2 |
| S. Ste. Marie . . | 23 | 0 | .6 | + .2 |
| MINN.Duluth . . . . | 24 | + 1 | .7 | + .3 |
| Internatl Falls . | 20 | 0 | .5 | + .2 |
| Minneapolis . . . | 27 | 0 | .4 | 0 |
| Rochester . . . . | 26 | - 1 | .2 | - .2 |
| St. Cloud . . . . | 23 | - 2 | .6 | + .3 |
| MISS.Jackson. . . . | 57 | + 1 | T | - 1.3 |
| Meridian. . . . . | 56 | 0 | .1 | - 1.3 |
| MO.Columbia . . . . | 47 | + 6 | .9 | + .3 |
| Kansas City . . . | 46 | + 6 | .8 | + .2 |
| St. Louis . . . . | 43 | 0 | .1 | - .6 |
| Springfield . . . | 49 | + 6 | 1.1 | + .5 |
| MONT.Billings . . . | 43 | +11 | .7 | + .5 |
| Glasgow . . . . . | 30 | + 6 | T | - .1 |
| Great Falls . . . | 43 | +14 | T | - .2 |
| Havre . . . . . | 40 | +15 | 0 | - .1 |
| Helena. . . . . | 43 | +13 | .2 | + .1 |
| Kalispell . . . . | 37 | + 7 | .1 | - .1 |
| Miles City. . . . | 35 | + 6 | T | - .1 |
| Missoula. . . . . | 40 | + 7 | .1 | 0 |
| NEBR.Grand Island . | 41 | + 7 | .7 | + .5 |
| Lincoln . . . . . | 42 | + 6 | 1.9 | + 1.6 |
| Norfolk . . . . . | 37 | + 5 | 1.0 | + .7 |
| N.Platte. . . . . | 43 | + 9 | 1.0 | + .8 |
| Omaha . . . . . | 39 | + 5 | 1.6 | + 1.2 |
| Valentine . . . . | 41 | +11 | .8 | + .7 |
| NEV.Ely . . . . . | 35 | + 3 | .3 | + .1 |
| Las Vegas . . . . | 57 | + 3 | T | - .1 |
| Reno. . . . . | 42 | + 2 | .3 | + .2 |
| Winnemucca. . . . | 39 | + 2 | .5 | + .4 |
| N.H.Concord . . . . | 27 | - 5 | .1 | - .5 |
| N.J.Atlantic City . | 38 | - 3 | .2 | - .9 |
| Trenton . . . . . | 40 | - 1 | .1 | - .8 |
| N.MEX.Albuquerque . | 50 | + 5 | .1 | 0 |
| Roswell . . . . . | 51 | + 2 | T | - .1 |
| N.Y.Albany. . . . . | 29 | - 4 | T | - .6 |
| Binghamton. . . . | 28 | - 3 | .1 | - .5 |
| Buffalo . . . . . | 30 | - 1 | .5 | - .1 |
| New York. . . . . | 37 | - 3 | T | - .9 |
| Rochester . . . . | 30 | - 2 | .3 | - .3 |
| Syracuse. . . . . | 29 | - 3 | .4 | - .2 |
| N.C.Asheville . . . | 46 | + 1 | .2 | - .9 |
| Charlotte . . . . | 49 | - 1 | .2 | - .9 |
| Greensboro. . . . | 45 | - 2 | .1 | - .7 |
| Hatteras. . . . . | 46 | - 4 | .1 | - .8 |
| Raleigh . . . . . | 46 | - 3 | .3 | - .5 |
| Wilmington. . . . | 48 | - 6 | .4 | - .5 |
| N.DAK.Bismarck. . . | 29 | + 5 | T | - .1 |
| Fargo . . . . . | 25 | + 2 | .5 | + .3 |
| Williston . . . . | 28 | + 4 | .3 | + .2 |
| OHIO.Akron-Canton . | 36 | 0 | .1 | - .6 |
| Cincinnati. . . . | 42 | + 1 | .1 | - .8 |
| Cleveland . . . . | 38 | + 2 | .1 | - .6 |
| Columbus. . . . . | 38 | - 1 | .1 | - .7 |
| Dayton. . . . . | 40 | + 2 | .1 | - .6 |
| Toledo. . . . . | 34 | - 1 | .3 | - .3 |
| Youngstown. . . . | 33 | - 2 | .2 | - .5 |
| OKLA.Okla. City . . | 52 | + 5 | .5 | + .1 |
| Tulsa . . . . . | 56 | + 9 | 1.8 | + 1.3 |
| OREG.Astoria. . . . | 48 | + 4 | .6 | - .9 |
| Burns . . . . . | 41 | + 5 | .3 | + .1 |
| Medford . . . . . | 48 | + 3 | .7 | + .3 |
| Pendleton . . . . | 47 | + 4 | .4 | + .2 |
| Portland. . . . . | 51 | + 7 | .5 | - .3 |
| Salem . . . . . | 48 | + 3 | .5 | - .5 |
| PA.Allentown. . . . | 38 | 0 | .1 | - .7 |
| Erie. . . . . | 31 | - 1 | .2 | - .4 |
| Harrisburg. . . . | 39 | - 1 | T | - .8 |
| Philadelphia. . . | 40 | - 1 | .2 | - .6 |
| Pittsburgh. . . . | 36 | - 2 | .1 | - .7 |
| Scranton. . . . . | 33 | - 2 | .1 | - .5 |
| R.I. Providence . . | 31 | - 5 | .2 | - .7 |
| S.C. Charleston . . | 53 | - 3 | .2 | - .9 |
| Columbia. . . . . | 51 | - 3 | .2 | - .9 |
| Greenville. . . . | 49 | - 1 | .2 | - 1.0 |
| S.D. Aberdeen . . . | 29 | + 3 | .6 | + .4 |
| Huron . . . . . | 33 | + 5 | .7 | + .5 |
| Rapid City. . . . | 41 | +11 | T | - .2 |
| Sioux Falls . . . | 38 | + 1 | .5 | + .2 |
| TENN.Chattanooga. . | 48 | - 1 | .2 | - 1.1 |
| Knoxville . . . . | 49 | 0 | .4 | - .7 |
| Memphis . . . . . | 57 | + 7 | .1 | - 1.0 |
| Nashville . . . . | 49 | + 1 | T | - 1.1 |
| TEX.Abilene . . . . | 56 | + 2 | .5 | + .3 |
| Amarillo. . . . . | 47 | + 2 | .4 | + .2 |
| Austin. . . . . | 61 | + 2 | .7 | + .3 |
| Beaumont. . . . . | 63 | + 3 | T | - .6 |
| Brownsville . . . | 72 | + 5 | T | - .1 |
| Corpus Christi. . | 70 | + 6 | .6 | + .4 |
| Del Rio . . . . . | 61 | - 1 | .4 | + .3 |
| El Paso . . . . . | 55 | + 1 | 0 | - .1 |
| Fort Worth. . . . | 56 | + 2 | 2.0 | + 1.5 |
| Galveston . . . . | 62 | + 1 | T | - .6 |
| Houston . . . . . | 60 | 0 | .2 | - .4 |
| Lubbock . . . . . | 53 | + 5 | 1.2 | + 1.0 |
| Midland . . . . . | 55 | + 1 | .1 | 0 |
| San Angelo. . . . | 56 | - 1 | .2 | 0 |
| San Antonio . . . | 63 | + 3 | 1.5 | + 1.2 |
| Victoria. . . . . | 66 | + 4 | T | - .4 |
| Waco. . . . . | 58 | + 1 | 1.5 | + 1.0 |
| Wichita Falls . . | 54 | + 2 | 1.5 | + 1.1 |
| UTAH.Blanding . . . | 40 | + 2 | .3 | + .1 |
| Salt Lake City. . | 45 | + 6 | .2 | - .2 |
| VT.Burlington . . . | 26 | - 3 | T | - .4 |
| VA.Lynchburg. . . . | 44 | - 1 | .1 | - .7 |
| Norfolk . . . . . | 45 | - 3 | .5 | - .3 |
| Richmond. . . . . | 45 | - 1 | .1 | - .7 |
| Roanoke . . . . . | 44 | - 1 | T | - .8 |
| WASH.Colville . . . | 42 | + 5 | T | - .3 |
| Omak. . . . . | 44 | + 6 | T | - .2 |
| Quillayute. . . . | 48 | + 6 | 1.3 | - 1.1 |
| Seattle-Tacoma. . | 50 | + 6 | .2 | - .6 |
| Spokane . . . . . | 42 | + 5 | .3 | - .1 |
| Walla Walla . . . | 49 | + 4 | .5 | + .2 |
| Yakima. . . . . | 46 | + 5 | T | - .1 |
| W.VA.Beckley. . . . | 40 | 0 | .1 | - .9 |
| Charleston. . . . | 44 | 0 | .5 | - .4 |
| Huntington. . . . | 43 | - 1 | .2 | - .8 |
| Parkersburg . . . | 40 | - 2 | .2 | - .6 |
| WISC.Green Bay. . . | 27 | - 1 | .1 | - .3 |
| La Crosse . . . . | 33 | + 3 | .2 | - .3 |
| Madison . . . . . | 30 | + 1 | .2 | - .2 |
| Milwaukee . . . . | 31 | 0 | .3 | - .2 |
| WYO.Casper. . . . . | 38 | + 8 | .2 | 0 |
| Cheyenne. . . . . | 40 | + 9 | .5 | + .3 |
| Lander. . . . . | 35 | + 4 | .2 | 0 |
| Sheridan. . . . . | 37 | + 7 | .1 | - .2 |
| P.R.San Juan. . . . | 79 | + 3 | 1.0 | + .6 |

Based on 1941-70 normals

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## State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Drier, warmer weather; temperatures averaged 1 to 5° above normal. Light showers northwest areas 13th, southwest 15th.

Fieldwork: 3.6 days favorable. Soil moisture mostly adequate. Spreading fertilizer and lime, breaking ground, and planting corn major activity. Potato planting underway Sand Mountain area. Plowing 35% complete. Stored feed short. Pastures short, mostly poor. Wheat condition fair.

ARIZONA: Precipitation light, scattered. Temperatures near normal.

Final seedbed preparations underway cotton, western areas. Over 30% planted Yuma County, 18% Statewide, 2% 1978. Final harvest old crop virtually complete. Small grains, good progress, 80% past jointing, 15% heading. Grain sorghum, corn, safflower planting underway west. Seedbed preparations underway central, southeast. Sugarbeets excellent progress. Good regrowth alfalfa after cutting. Yuma County lettuce seasonal progress. Later lettuce, central, eastern areas growing well. Harvest underway central areas. Harvest miscellaneous vegetables, good progress. Planting cantaloups, watermelons, etc. good progress. Grape vines good growth. Deciduous fruit trees full bloom, Salt River Valley. Citrus harvest steady progress. Lemons tapering off, Valencia harvest increasing, grapefruit harvest steady. New growth abundant, all groves. Warmer weather, ranges improved. Ranges good to excellent. Stock water, soil moisture adequate. Cattle, calves excellent.

ARKANSAS: Temperatures averaged above normal and a very dry week. Lowest temperature 24°; highest 80°. Most precipitation 0.49 in.; least zero.

Fieldwork began earnestly with land preparation and fertilizer pre-plant applications. Fruit trees showing heavy bud-swelling in Clarksville area. Nitrogen tondressing still being applied on fescue pastures and small grains. Limited forage became available from fescue and small grain pastures, thus easing the heavy hay feeding. Cattle in fair to good condition.

CALIFORNIA: A tropical airmass brought light precipitation to southern California first of period and several weather fronts moved through from midweek on. The snow level lowered down to near 3,000 feet in the northern Sierra during the latter half of the period. Thunderstorms developed in the northern San Joaquin and lower Sacramento Valleys one afternoon after midperiod. Daytime temperatures were above to much above normal first of the period then a cooling trend. No freezing temperatures were reported at the low elevation stations.

Small grain planting, weed control preparation continued northeastern interior. Fertilization continued San Joaquin Valley. Alfalfa good growth central coast, Sacramento, San Joaquin Valley. Harvest full swing desert area. Sugarbeet planting underway south coast. Beet digging active San Joaquin Valley. Cotton planting preparation continued San Joaquin Valley. Planting continued Imperial Valley, Riverside County. Bloom for most deciduous fruit crops near completion. Lemon, Navel orange, and Minneola tangerine packing in progress. Almonds leafing out. Walnuts breaking dormancy. Harvest of asparagus, carrots, and winter spinach active. Lettuce harvest winding down Imperial, increasing Palo Verde. Melon planting complete in desert, continued central valley. Tomato planting made good progress. Warm temperatures continued good grass growth. Supplemental feeding necessary lack strength in grass. Warm dry weather aided calving, lambing mountain areas. Movement bee colonies from almonds to citrus underway.

COLORADO: Fair weather dominated the State until weekend when 3 to 8 in. snow fell on many eastern sections. Several higher elevations reported 2 to 3 feet new snow. Temperatures mostly above normal for week.

Winter wheat fair to good. Very little wind damage. Mountain snowpack above normal, expecting excellent water supply for spring season. Soil moisture generally short. Pruning fruit trees activ on west slope. Roughage and hay supplies slightly below average. Calving and lambing active. Livestock good condition. Ranges and pastures fair to poor.

FLORIDA: High pressure dominated through the 14th, when a weak cold front entered the Panhandle, moving off the southeast coast by the 15th. Only light, scattered rainfall occurred. Low temperatures ranged from the 40's north to around 60° along the southeast coast. Highs ranged from the 60's north to upper 70's to around 89° south.

Soil moisture mostly adequate, a few wet spots Panhandle, a few dry areas south. Corn planting active, tobacco transplanting slow, but increasing. Land being prepared for planting peanuts and soybeans. Small grains mostly good. Sugarcane harvest nearing completion. Pecan tree spraying underway. Southern pastures good; elsewhere, poor to mostly fair. Winter pastures providing bulk of grazing. Permanent pastures responding to warmer weather. Cattle mostly fair to good. Citrus grove condition excellent, moisture adequate most areas, some irrigation. Bloom progressing with warmer weather needed. Early and mid-orange harvest slowing as supplies are running out. Overall vegetable crop generally very good to excellent. Improved weather very beneficial. Progress mostly good, growth rapid. Light windburn damage to tender foliage west central area. Supplies strawberries up considerably. Shipments snap beans, celery, chinese cabbage, cucumbers, parsley, peppers, squash, tomatoes increased while cabbage, carrots, cauliflower, sweet corn, eggplant, lettuce, potatoes, radishes held steady. Escarole, okra supplies decreased. Strawberry crop outlook good. Watermelons making good progress most areas.

GEORGIA: Temperatures near normal ranging from mid-40's north to mid-50's central and south. Rainfall 0.25 to 0.50 in. north and south and 0.75 to 1.00 in. central. Warmer and dry on 17th and 18th.

Soil moisture adequate to surplus. Fieldwork continued curtailed due to excessive wet soil conditions in central portions. Small grains fair to good north, good central and south. Pastures fair north and central, good south. Livestock condition ranged fair to good north, fair central and south. Tobacco plants good, some being set. Corn planting continued active east and south.

HAWAII: Favorable weather continued. Most major crop areas dry. Showers light mainly higher, windward elevations. More areas irrigated. However, isolated heavy showers 18th Waimanalo, Oahu caused some silting, bruising leafy crops.

Spraying frequent for disease, insect control. Vegetable supplies light. Banana supplies seasonally light. Papaya supplies down; roguing diseased trees continued. Pineapple harvesting slow. Sugar harvesting getting active. Pastures generally fair to good.

IDAHO: Spring-like weather prevailed over area last week. Highest temperature 70° at Grandview. Precipitation generally light and below normal.

Mild weather continued through week. Northern and eastern area still too wet for fieldwork. Some fertilizing southcentral area. Grain drilling active southwest. Fieldwork heavy. Calving and lambing continued to pick up.

ILLINOIS: Temperatures 1 to 4° above normal central, west-southwest districts; 1 to 5° below normal remainder. Maximum temperatures 60's and 70's. Precipitation 0.33 to 0.50 in. north, elsewhere mostly less than 0.33 in., extreme south no precipitation; snowcover 3 to 5 in. north; many rivers, creeks flooding.

Soil moisture adequate to surplus. Winter wheat good. Some damage from ice, water. Limited number fields being fertilized. Grain movement improving; quality stored grain good. Livestock fair to good. Weight gain slow, feeding heavy.

INDIANA: Mild temperatures and light precipitation. Temperatures averaged 3° above normal; ranges 75° in south to a low of 10° in Farmland. Snow on 14th in the north was very light and no snowcover developed during the week. Precipitation averaged 0.20 in. in the north and central, 0.10 in. in the south.

Soils firm enough to support equipment few days, mostly early in period. Spreading fertilizer, lime and manure, seeding clover, mending fences, readying equipment. Overwintering crops greening up.

IOWA: A mild week with heavy weekend rainfalls southwest and west central and a few adjacent counties. In other localities, rainfalls were more seasonal. Snowcover diminished to 4 in. at Mason City and lesser amounts in most other northern counties to little or none over the southern areas. Run-off from snow melt and rains raised all streams and considerable lowland flooding reported. Much standing water also reported.

KANSAS: Precipitation ranged 1.00 to over 3.00 in. central, 0.75 to 1.50 in. most areas east and south, 0.10 in. or less northwest. Temperatures ranged from 52° southeast to 46 to 49° elsewhere, 6 to 11° above normal.

Warm days help wheat. Fertilization underway. Wind damage minimal. Oats seeded 10%, last year 0%, average 35%. Barley seeded 10%, last year 1%, average 30%. Moisture short in western one-third, adequate to surplus in remaining areas.

KENTUCKY: Temperatures averaged near the seasonal normals with above normal readings beginning and end, and below normal middle. Precipitation below normal, averaging 0.10 to 0.20 in.

Warming temperatures and little or no rain brought the first general 1979 field activity. Fertilizing, plowing, and preparing tobacco beds primary activities. Some soil still very wet, but well drained areas have dried considerably. Grass beginning to show signs of greening.

LOUISIANA: Temperatures normal to 3° above normal. Extremes: 88 and 34°. Scattered light showers.

Fieldwork: 3.9 days suitable. Soil moisture adequate to surplus. Land preparation and top-dressing pastures active. Rice, corn, Irish potato planting underway. Small grains fair to good. Pastures below average. Cattle fair, supplemental feeding.

MARYLAND & DELAWARE: Temperatures averaged 1° below normal. Highs averaged mid to upper 50's and lows averaged upper 20's to low 30's, except in western Maryland where highs averaged in the 40's and lows averaged in teens. Precipitation was light with most stations reporting between 0.50 and 0.75 in. of rainfall.

MICHIGAN: Temperature averaged about normal for the week. Coldest days had below zero readings. The warmest temperatures reached 70°. Precipitation was generally below normal for the week ranging from a trace to 0.61 in. Large declines in snow depths occurred during the week. Up to 10 in. remained on the ground in portions of northern Lower Michigan while up to 34 in. snow depths were reported across the Upper Peninsula. Farm activities included feeding livestock.

MINNESOTA: Temperatures averaged near normal. Extremes: 47° at Bemidji and Hibbing, -16° at International Falls. Precipitation averaged near normal. Precipitation ranged less than 0.10 in. much of north and west central to more than 0.50 in. east central, parts of extreme west and north central. Snow fall this week traces to 1 in. Snow depth at week's end 20 to 27 in. north central through north east, decreasing to less than 12 in. most of south and extreme west, traces extreme southwest corner.

MISSISSIPPI: Temperatures varied from normal to 7° below. Extremes: 26 and 79°. Mostly clear weather and sunshine but some light rain, generally totaling less than 1.00 in.

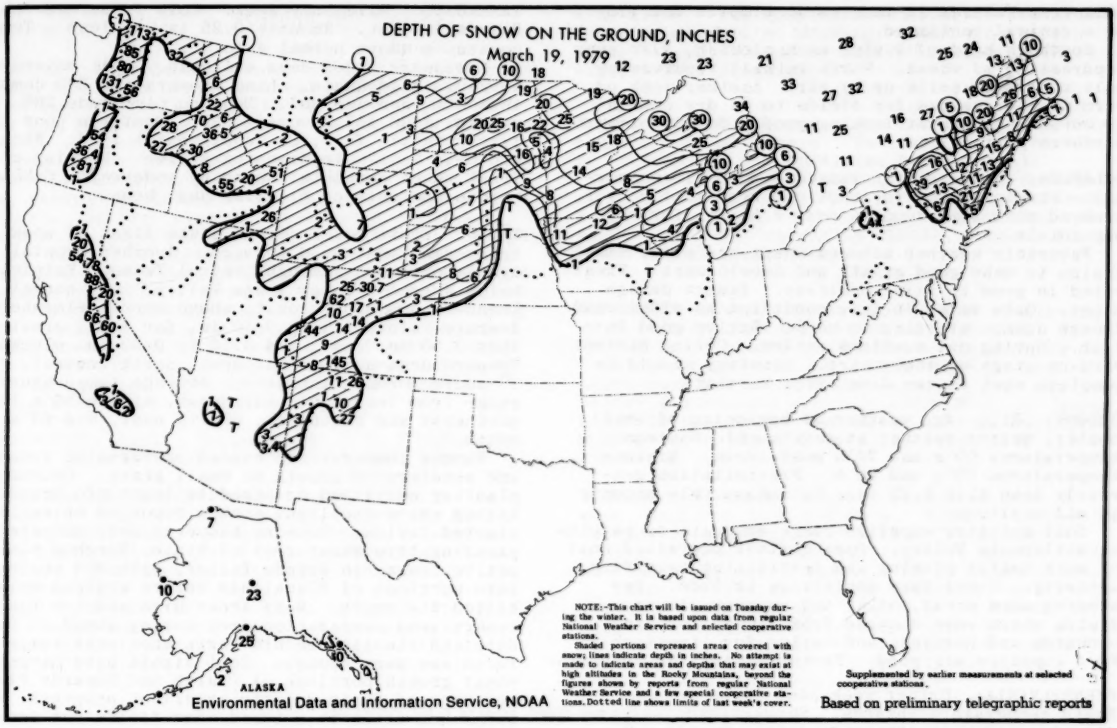
Soil moisture adequate to surplus. Fieldwork 2.9 days suitable. Land preparation more active as soils dry but many areas still too wet. Some fertilizer, lime applied. Watermelon planting nearing completion some southern areas. Acreage plowed 31%, 24% 1978, 34% average. Corn 7% planted, 12% 1978. Irish potatoes 31% planted, 29% 1978. Winter wheat fair condition, 7% jointing, 14% 1978. Pastures fair to poor condition. Livestock fair condition and feeding continued most areas. Hay and roughage supplies and feed grain supplies rated short to adequate.

MISSOURI: Temperatures warmer during week, averaging 2° to 4° below normal Bootheel and E. Ozarks, 2° above normal elsewhere. Precipitation light, averaging 0.25 in.

Pastures turning green. Small amount of fieldwork. Most fields still wet.

MONTANA: Temperatures averaged about 7° above normal at each end of the State and from 10-15° above through the central portions. Maximum temperatures in the 60's were observed over much of the State mid-week. Precipitation was generally light except for the southwest and southcentral parts which had moderate to heavy amounts.

Winter wheat good condition. Snowcover mostly gone. Livestock fair to good. Calving and lambing active. Losses of newborn near normal.


DEPTH OF SNOW ON THE GROUND, INCHES
March 19, 1979
NOTE:-This chart will be issued on Tuesday during the winter. It is based upon data from regular National Weather Service and selected cooperative stations.
Shaded portions represent areas covered with snow; lines indicate depth in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular National Weather Service and a few special cooperative stations. Dotted line shows limits of last week's cover.
Supplemented by earlier measurements at selected cooperative stations.
Based on preliminary telegraphic reports
ALASKA
Environmental Data and Information Service, NOAA

NEBRASKA: Temperatures 10° above normal west; 5° above normal central and east. No measurable precipitation through 17th evening. From 1.00 to 2.00 in. rain reported east night of 17th and 18th; up to 16.0 in. snow reported west.

NEVADA: Strong high pressure developed over Nevada early in week and sent afternoon temperatures well above normal thru mid-week. Temperatures averaged 3° to 8° above normal for entire period. Specific extremes ranged from high of 79° Las Vegas on 12th to low of 7° Mountain City also on 12th.

NEW ENGLAND: 10 to 15° subnormal early week then warmed to 10° above normal midweek, then 10 to 15° subnormal the 15th and 16th. The rest of the week just about normal. Rain showers ahead of the cold front 0.20 to 0.40 in. of rain.

NEW JERSEY: Temperatures averaged 4° below normal. Extremes: 10° Long Valley and Newton 16th and 68° Toms River 14th. Weekly rainfall averaged 0.05 in. north, 0.20 in. central and 0.14 in. south. Heaviest 24 hour total: 0.35 in. Freehold and Long Branch 14th.

Soil moisture adequate to surplus. Some early crops being seeded. Wintered cover spinach greening. Fruit pruning continued.

NEW MEXICO: Scattered light showers midweek and again over the weekend. Slight day-to-day cooling through the week but temperatures averaged near to slightly above normal.

Open weather permitted outdoor work to continue uninterrupted. Main activities plowing, irrigation, fertilizing, herbicide application. Planting Irish potatoes, chile peppers started. Wheat, barley good condition. Starting growth. Grazing being discontinued. Alfalfa growing south, breaking dormancy north. Ranges greening up. Calving, lambing, shearing continued active.

NEW YORK: Average weekly temperatures were near to slightly below normal with Old Forge reporting the extreme of 14 below zero. Temperatures ranged from the upper teens in the higher elevations to the mid-30's in New York City and Long Island. Precipitation was below normal with less than 0.50 in. in most areas except for a few stations in the north country reporting from 0.50 to 1.00 in.

NORTH CAROLINA: Temperatures: 1 to 7° subnormal. Precipitation: scattered showers, 0.25 to 0.75 in.

Fieldwork: 2.9 days suitable. Soil moisture adequate to surplus. Condition: Tobacco plant beds, Irish potatoes and pastures fair to good. Small grains mostly good. Supplies: Hay, roughage and feed grains adequate. Plantings: Irish potatoes 12%, 1978 8%, average 34%.

NORTH DAKOTA: For most part, past week's weather mild and dry. Precipitation totals ranged from 0.50 in. to near 1.00 in. southeast to less than 0.10 in. extreme west. Largest amount 0.80 in. east central. Temperature averaged 1 to 7° above normal west and central and near normal east. Extremes: 51° south central to -10° northeast.

Movement of grains and potatoes slow due to transportation availability.

OHIO: Temperatures averaged 1° higher than normal the past week, ranging from 75° in south to 3° at Canfield. No snowcover developed during week. Precipitation averaged around 0.10 in. Soils began to show a significant increase in temperature in south where averages rose to the mid-40's.

Soil temperatures in the low 30's north and mid-30's central continued.

Southern half of State, much plowing, also some topdressing of wheat. Northern half topdressing only on frozen soils or by air. Another week of warm weather needed for fields to be dry enough to be worked. Wheat looking good. Still dormant northern part.

OKLAHOMA: Temperatures ranged 4 to 6° above normal. Precipitation for week occurred mostly over weekend with some amounts near 2.50 in. for one-day totals.

Favorable weather allowed wheat and other small grains to make good growth and development. Wheat rated in good to fair condition. Insect damage minor. Oats rated in fair condition as widespread freeze damage starting to show. Barley good to fair. Spring oat seedings active. Cotton harvest wind-up stage southern part. Ginnings should be complete week to ten days after harvest.

OREGON: Mild, dry weather at beginning of week; cooler, wetter weather at week's end. Maximum temperatures 60's and 70's most areas. Minimum temperatures 30's and 40's. Precipitation generally less than 0.75 in., but measurable amounts in all sections.

Soil moisture supplies range adequate to surplus in Willamette Valley. Open weather prevailed most of week making plowing and fertilizing main farm activity. Other farm activities include: reseeding some wheat, oats, and crimson clover fields which were damaged from freeze; pruning orchards and berries; and caring for livestock. Feed supplies are good. Pastures starting to green.

PENNSYLVANIA: Driest week past three months. Rapid temperature changes. Showers and few snow flurries mid-week otherwise fair. Weekly precipitation 0.10 in. many areas up to 0.40 in. north central mountains. Temperatures near normal southeast and southwest, 4 to 7° below normal northwest interior.

Mild weather started green-up. Equipment preparation, fence repair, spreading manure main activities.

PUERTO RICO: Island average rainfall 0.50 in. or 0.01 in. below normal. Temperatures averaged about 77° on coasts and 71° interior. Extremes: 92 and 52°.

SOUTH CAROLINA: Below normal eastern half, above normal western portion. Some interior midweek frost or freezing, then warmer. Several stations 77° 18th. Scattered light showers 13th.

Land preparation made good progress, but much land remains too wet to complete preparation, some more than 2 weeks behind usual. Tobacco plant development about normal. Earliest peach varieties started blooming slightly later than normal, about 8% of ridge bloomed. Cotton growers restricted volume of offerings to spot cotton markets as prices trended lower. Transplanting tomatoes coastal counties about midpoint. Cucumber seeding well underway. Cabbage harvest getting underway in coastal counties.

SOUTH DAKOTA: Temperatures warmed and melted snow. Extremes: 73 and -10°. Averages: 25 to 35° snow-covered eastern areas. 35 to 45° west. Weekend storm brought heavy snow to the central section (8 to 12 in.). Above freezing temperatures and rains melted snowcover in the east, causing some flooding. Snowcover diminished in all areas except central. Precipitation: 0.50 to 1.29 in. central and east, none west.

TENNESSEE: Warm, dry week. Cold front midweek. Rainfall light. Amounts 0.25 in. or less. Temperatures above normal 4 to 7°.

Fieldwork: 2.0 days suitable. Soil moisture surplus to adequate. Land preparation 28% complete, 1978 21%, average 38%. Tobacco plantbeds 29% seeded, 1978 15%, average 52%. Pastures poor to fair. Cattle fair; on supplemental feed. Wheat and oats fair. Topdressing active. Pruning of fruit trees complete; spraying underway. Cabbage, onions and lettuce planting just begun.

TEXAS: Front moved across State first of week triggering scattered showers. Another frontal system extended through central Texas. Rainfall below normal through lower Valley, near normal Trans-Pecos, upper coast, above normal elsewhere. Average rainfall less 0.10 in. far west, greater than 0.50 in. east, and 0.10 to 0.50 in. elsewhere. Temperatures near normal west, north central, 3 to 7° above normal elsewhere. Average temperatures range from lower 50's northwest, middle 50's in northeast and southwest, 60° in east, mid-60's south.

Warmer temperatures caused pastures to green up and accelerated growth of small grain. Cotton planting continued on schedule lower Rio Grande Valley where excellent stands reported on earlier planted fields. Showers hampered soil preparation, planting throughout rest of State. Sorghum planting active lower Rio Grande Valley, extended northward into portions of Blacklands before weekend moisture halted fieldwork. Many areas High and Low Plains report land preparation progressing ahead of schedule and planting should begin when soil temperatures are warm enough. Cool nights have hampered wheat growth portions of Plains and Edwards Plateau but rest of State reports excellent progress. Armyworms and mites threatened some fields but insect damage minimal Statewide. Rust formation reported in south, with early fields starting to head. Corn planting 13%, 10% 1978, 13% average. Cotton planting 6%, 6% 1978, 5% average. Rice planting 14%, 4% 1978, 8% average. Sorghum planting 20%, 23% 1978, 27% average.

Lower Rio Grande Valley onions making good growth. Supplies carrots, cabbage, lettuce move to market. Grapefruit, Valencia orange harvest winding down. Coastal Bend watermelons up to four-leaf stage. Spinach harvest interrupted by rain. Laredo carrot, cabbage harvest continued. Onions, watermelons, cantaloups doing well. Eagle Pass spinach harvest active. Onions progressing well. San Antonio-Winter Garden spinach and carrot harvest active. Some early watermelons up and progressing well. Early cabbage up to good stand. Trans-Pecos onion planting active at Pecos. Peach trees upper Gulf Coast through hill country full bloom. Some trees south approaching petal fall. Pecan trees south and south central budding out.

Range, pasture conditions continued to improve with warm weather and recent moisture. Heavy winter grazing depleted some forage supplies in the Panhandle. In north and central small grains responding to warmer temperatures and making additional growth. Some stockers moved off wheat pastures in High Plains area. Cattle continue fair to good condition. Some hay and supplemental feeding continued north and central.

UTAH: Recurring periods scattered shower activity latter half of period. Accumulated amounts moisture generally light to moderate. Average temperatures ranged from 10° below to 6° above.

Many areas wet and muddy from melting snow. New snow in south temporarily slowed spring preparations. Fruit tree pruning continued.

Livestock mostly good. Calving and lambing continued.

VIRGINIA: Warm days but cool nights. Temperatures ranged from near normal central and east to 10° below normal west and southwest. Precipitation 12th and 15th ranged 0.50 to 0.75 in. with some heavier thundershowers.

Topsoil moisture adequate to surplus. Continued extremely wet soils preventing land preparation most areas. Fieldwork: 2.0 days suitable. Pastures, barley, alfalfa, wheat good condition. Peach bloom expected mid-April most areas. Prospects good. Flue-cured tobacco plant beds 50% seeded, condition fair. Burley 15% seeded, condition good. Pastures starting to green with beef cattle securing 11% of forage from grazing, dairy cattle 4%, sheep 10%. Livestock in good condition. Some potatoes seeded Eastern Shore but work 2 to 3 weeks behind usual. Spring oats seeded central area. Some discing, plowing, spreading fertilizer and lime. Vaccinating and delousing cattle.

WASHINGTON: West: Temperatures 4 to 7° above normal. Precipitation 0.40 to 1.70 in. below normal.

Spring-like conditions have dried fields enough for work. Early plowing, spreading manure and lime continued. Digging raspberry planting stock nears halfway point. Berries are breaking dormancy. Pastures are starting to green up. Some grazing.

East: Temperatures 5° above normal. Precipitation near normal to 0.20 in. below normal.

Reseeding fall grains and seeding spring grains major activities. Seed is becoming scarce in some areas. Pear psylla developing in orchards, spraying as well as pruning, brush removal continue. Lambing winding down. Calving in full swing. Feed adequate.

WEST VIRGINIA: Temperatures near normal northeast, below normal elsewhere. Extremes: 73° Charleston, 5° Greenbank. Precipitation below normal.

Fieldwork: 2.9 days suitable. Soil moisture adequate to surplus. Hay, grain and other feed supplies adequate to surplus. Some plowing on sandy loam soil, spreading manure, pruning fruit trees and mending fences.

WISCONSIN: Temperatures above normal beginning of week, turned considerably colder mid-week, but warmed to 50's 18th. Lows below zero north and to single figures south. Extremes: 56 and -5°. Light snow north and flurries south 13th and 14th. Warmer and showers weekend, about 0.25 in. south and 0.50 in. north. Snowcover melting rapidly, most moisture soaking in soils which have little frost.

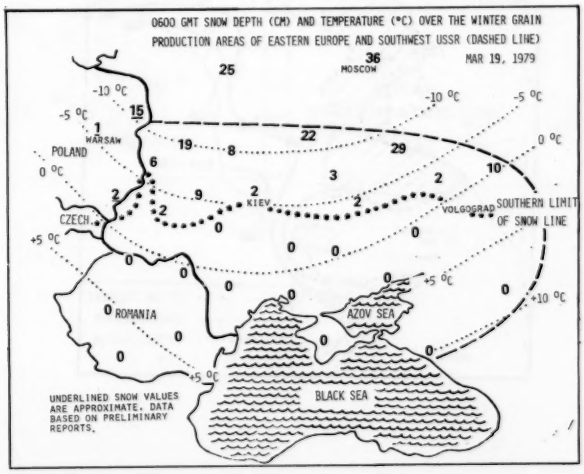
WYOMING: Warm, dry weather prevailed most of week. Highs in 50's and 60's. Warmest temperature Torrington and Carpenter with 67°. Minimums mostly in teens. Moisture light or absent most of state. Greatest amount 0.50 in. Lost Cabin.

Warm, springlike weather opened up more range for livestock grazing. However, the heavy, wet snow in southeast over weekend caused some difficulty for ranchers in middle of calving and lambing. Moisture improves outlook for winter wheat.

## World Weather and Crop Update

March 12 - 18 and February Summary

USSR. Precipitation during February ranged well above normal over the western half of the winter grain area, but eastern areas were generally well below normal. Temperatures varied widely with very warm conditions early in the month sharply reducing the snowcover and posing a serious threat to overwintering grain. However, the return to colder conditions was gradual, and winterkill is expected to be about normal for the area. Sections of potentially serious winterkill are restricted to the southwestern and southeastern corners of the area. Winter grains may be breaking dormancy in these two areas as the result of much warmer than normal temperatures which have persisted since the beginning of the month. The northern half of the Ukraine and all areas to the north still have a considerable snowcover, although the snowline did recede slightly during the week. Precipitation was normal to above normal over the entire area with heaviest amounts occurring in the north. Moisture is generally adequate over most of the winter grain area for the beginning of growth.



CHINA. Precipitation accumulated below normal over the southern provinces of China in February with generally above-normal temperatures. Much of the southern area was completely void of freezing temperatures. In general, the moisture situation over the winter grains area to the north is much better than last fall. Over the past six months, rainfall has been near normal due in large measure to a very wet October. Recent rains during the first week of March also should have boosted soil moisture. Rainfall during the remainder of March and all of April will be very important to winter wheat and early rice---the two most important early grain crops. Reports have indicated that growth has developed prematurely and is well underway in the main winter wheat areas.

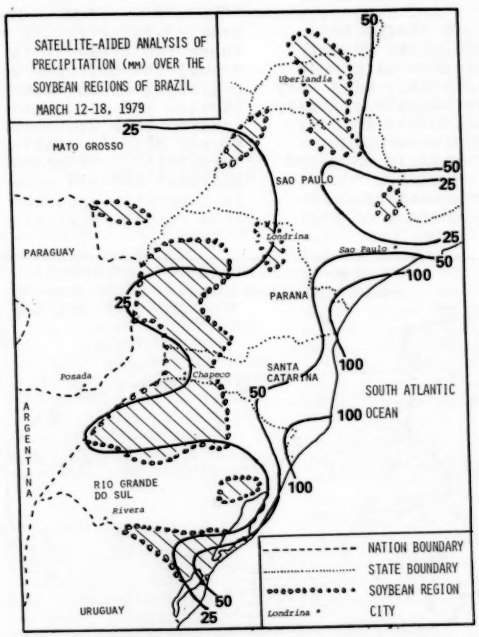
AUSTRALIA. The main winter grain areas, which will be planted in May, were seasonally dry with amounts well below normal. Most of these portions received less than 10 mm, but the normal is only about 25 mm. Rainfall has generally been persistent over the northern parts of the country as tropical activity moved through the area. So far in March, the area has continued dry, although heavy rains of 50 to 155 mm did fall along the eastern coasts.

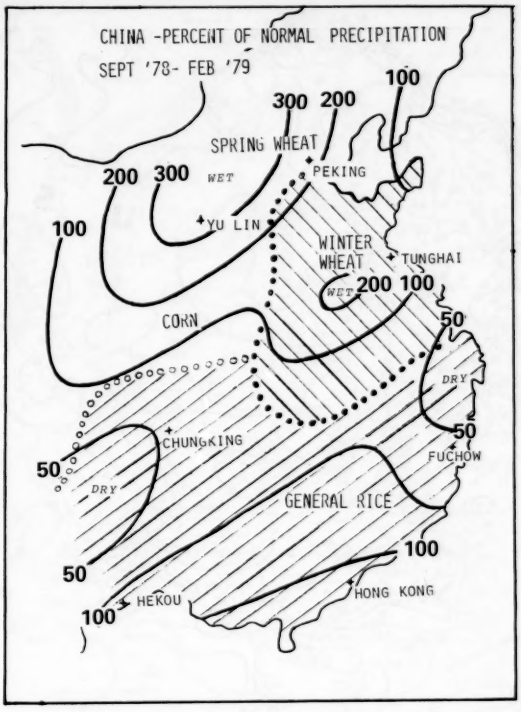
INDIA. Although amounts were seasonally light, rainfall over much of India ranged well above normal. Totals through the central states managed 25 to 90 mm. Snowpack is indicated to be excellent in the northern states which should help to assure good water supplies during the coming month. These water supplies are important for both irrigation and the generation of hydroelectric power. This past week, only light showers dampened the northern states, although there are reports of relief efforts to get food to isolated villages being stymied by heavy snows. Winter wheat is approaching maturity with harvest getting underway shortly.

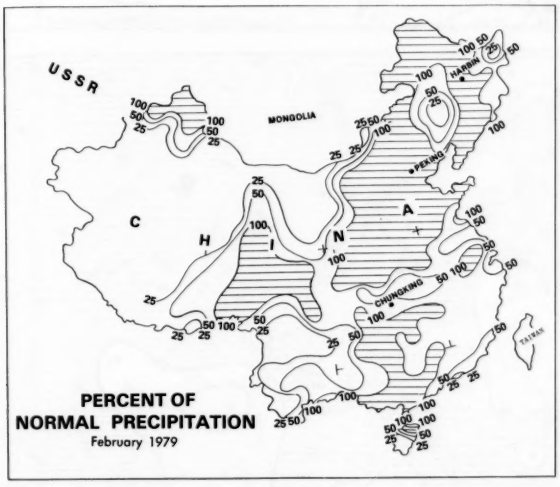
AFRICA. Moisture conditions over northern Africa were generally good for the development of winter wheat which had suffered earlier in the year from dryness. Rainfall was near to above normal again this week, although the heaviest activity in Tunisia fell outside the winter wheat area. In the south, the Maize Triangle of the Republic of South Africa continued dry, and crops in the area have been severely damaged. The crop is near or at maturity.

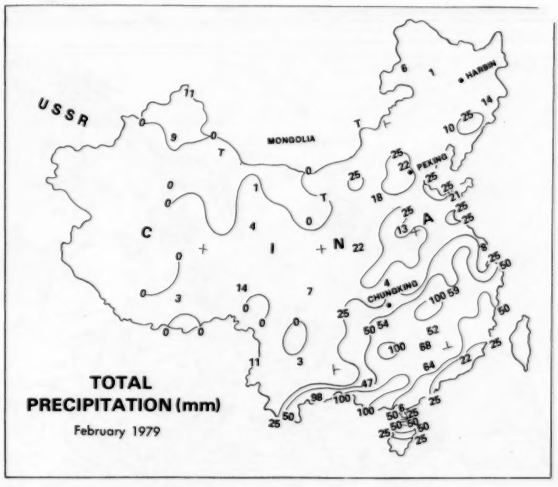
EUROPE. Western and southern Europe experienced a very wet February with amounts running 150 to over 300 percent of normal. However, eastern Europe was near to slightly below normal, particularly over the German Democratic Republic and Poland. A fair snowcover persists over Poland with some increase this past week. Western Europe was also very wet this week with amounts of 25 to 75 mm over most of France, an average of 50 mm over northern Spain, and 30 to 65 mm over southeastern Europe. Soil moisture over the entire area likely ranges from adequate to excessive.

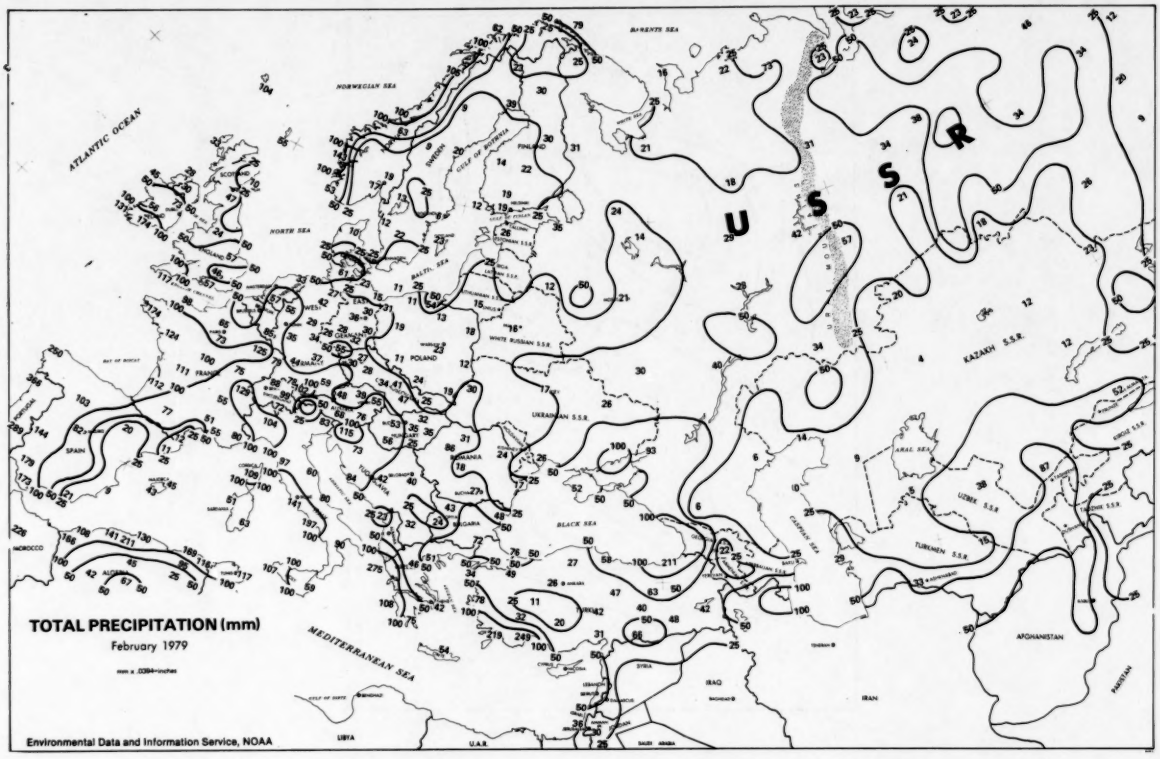
SOUTH AMERICA. The drought, which was holding onto Brazil's soybean areas during January finally released its grasp the second week in February, and the area finished with above-normal moisture for the month as a whole. Rainfall over the past two weeks has continued to help build up soil moisture and allow some recovery of late-planted soybeans in Rio Grande do Sul. Harvest is well underway in Parana and Santa Catarina under generally ideal conditions. The last good rain over the area was March 13th, and the favorable conditions should continue for at least three more days, and possibly longer. In Argentina, February was generally drier than normal except in the more northerly corn and soybean areas where amounts were near to slightly above normal. March has generally been drier, but crops are reported to be in good condition.

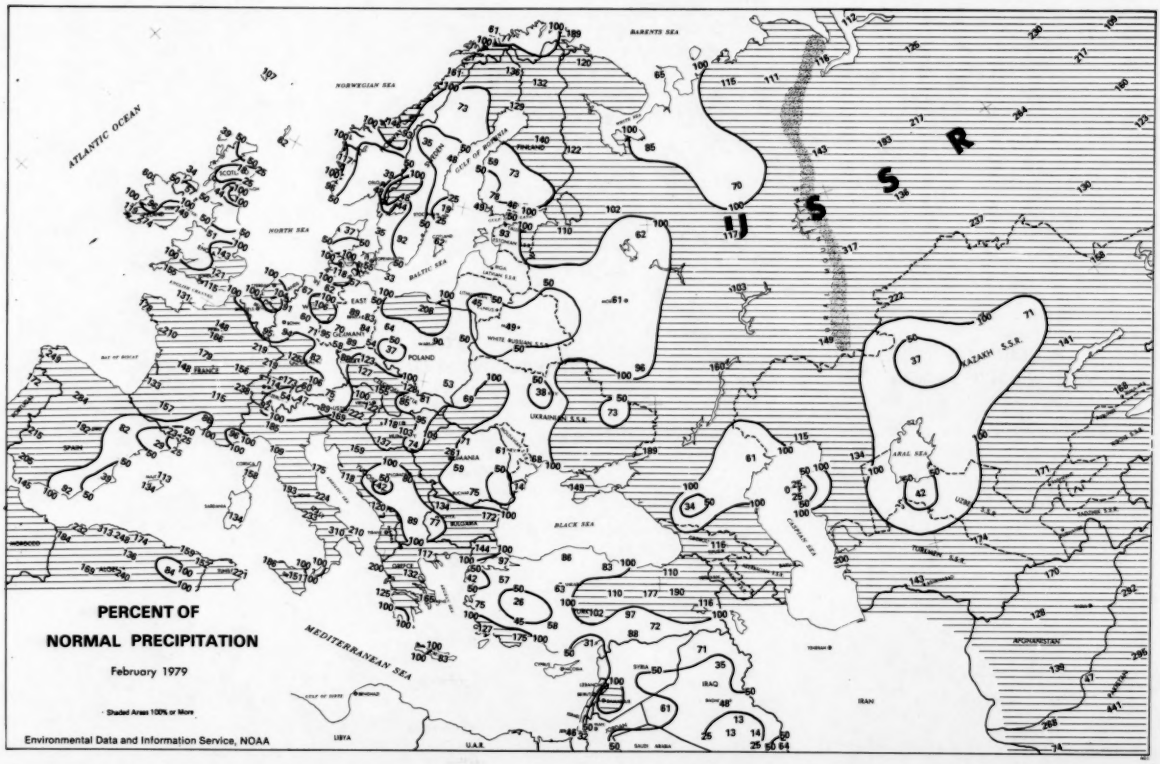



CHINA -PERCENT OF NORMAL PRECIPITATION
SEPT '78- FEB '79
SPRING WHEAT
WET
PEKING
YU LIN
WINTER WHEAT
TUNGHAI
WET
CORN
DRY
CHUNGKING
FUCHOW
DRY
GENERAL RICE
HEKOU
HONG KONG
100
200
300
50


USSR
MONGOLIA
HARBIN
PEKING
CHUNGKING
TAIWAN
C H I N A
PERCENT OF NORMAL PRECIPITATION
February 1979


USSR
MONGOLIA
HARBIN
PEKING
CHUNGKING
C H I N A
TOTAL PRECIPITATION (mm)
February 1979


TOTAL PRECIPITATION (mm)
February 1979
Environmental Data and Information Service, NOAA
ATLANTIC OCEAN
NORWEGIAN SEA
BARENTS SEA
NORTH SEA
BALTIC SEA
BLACK SEA
MEDITERRANEAN SEA
U S S R
POLAND
UKRAINIAN S.S.R.
WHITE RUSSIAN S.S.R.
KAZAKH S.S.R.
ARAL SEA
CASPIAN SEA
TURKMEN S.S.R.
UZBEK S.S.R.
KIRGIZ S.S.R.
TADZHIK S.S.R.
AFGHANISTAN
PAKISTAN
IRAN
IRAQ
SYRIA
SAUDI ARABIA
U.A.R.
LIBYA
MOROCCO
SPAIN
FRANCE


PERCENT OF
NORMAL PRECIPITATION
February 1979
Shaded Areas 100% or More
Environmental Data and Information Service, NOAA
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BARENTS SEA
NORTH SEA
BALTIC SEA
BLACK SEA
MEDITERRANEAN SEA
U S S R
POLAND
UKRAINIAN S.S.R.
WHITE RUSSIAN S.S.R.
KAZAKH S.S.R.
ARAL SEA
CASPIAN SEA
TURKMEN S.S.R.
UZBEK S.S.R.
KIRGIZ S.S.R.
TADZHIK S.S.R.
AFGHANISTAN
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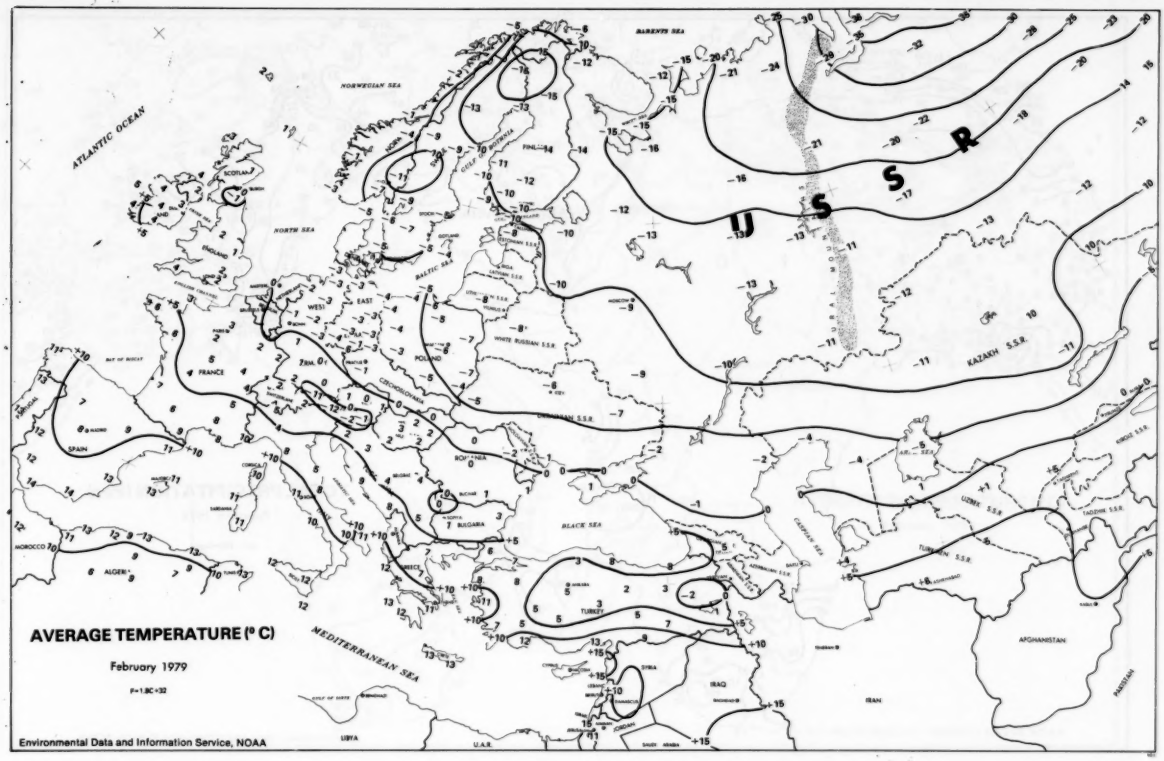
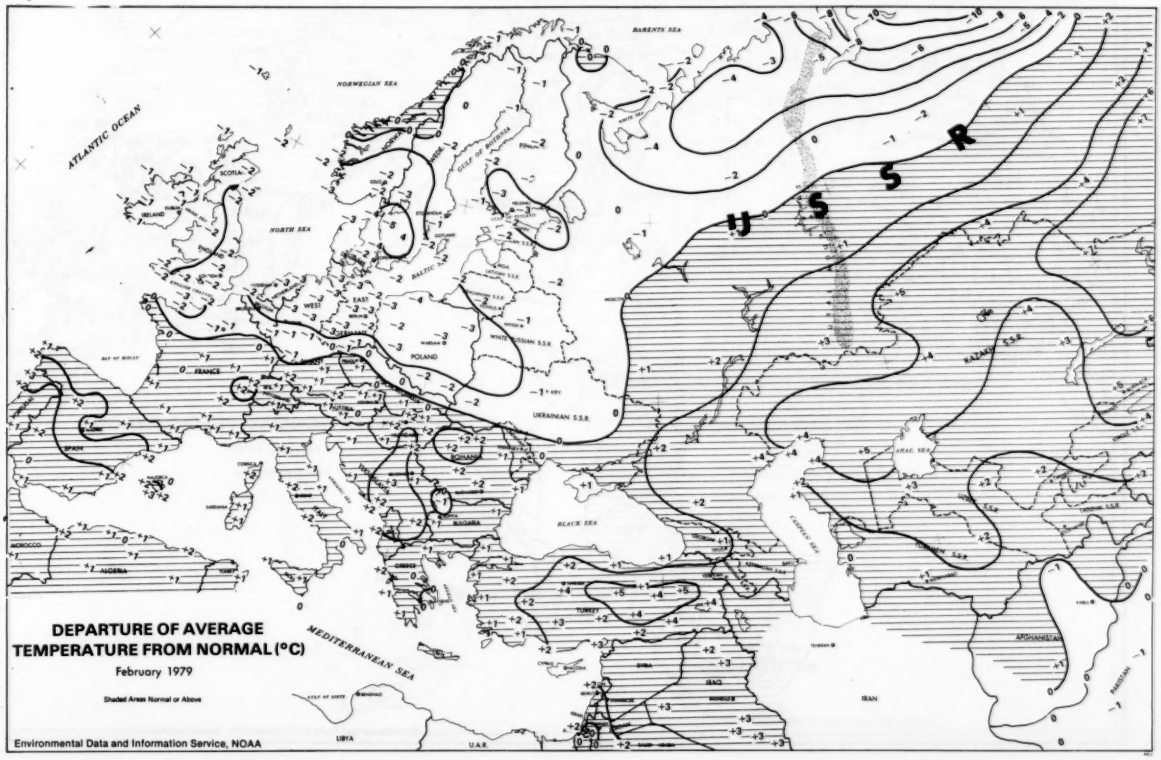
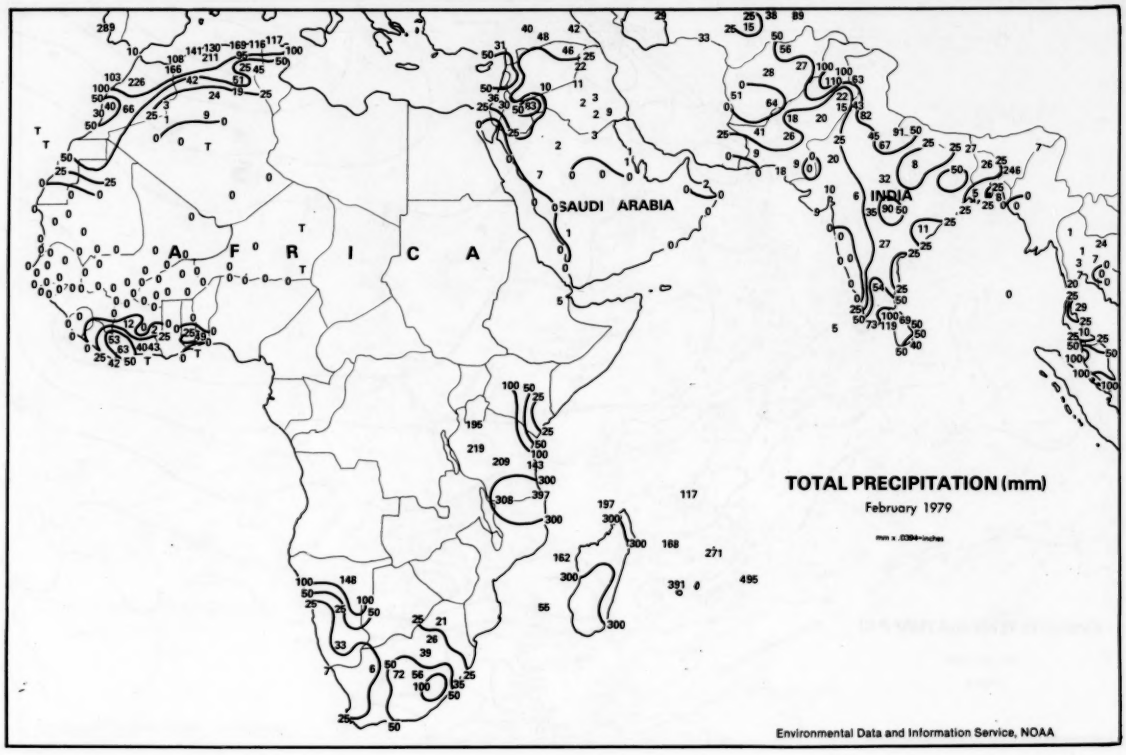
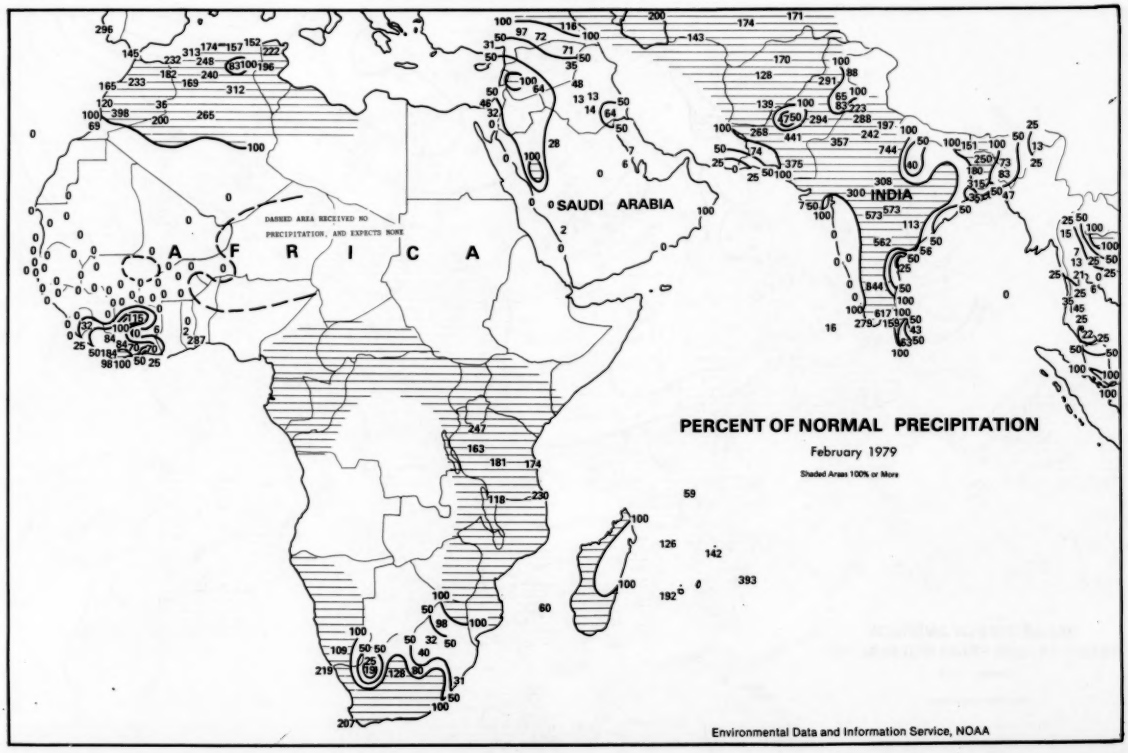
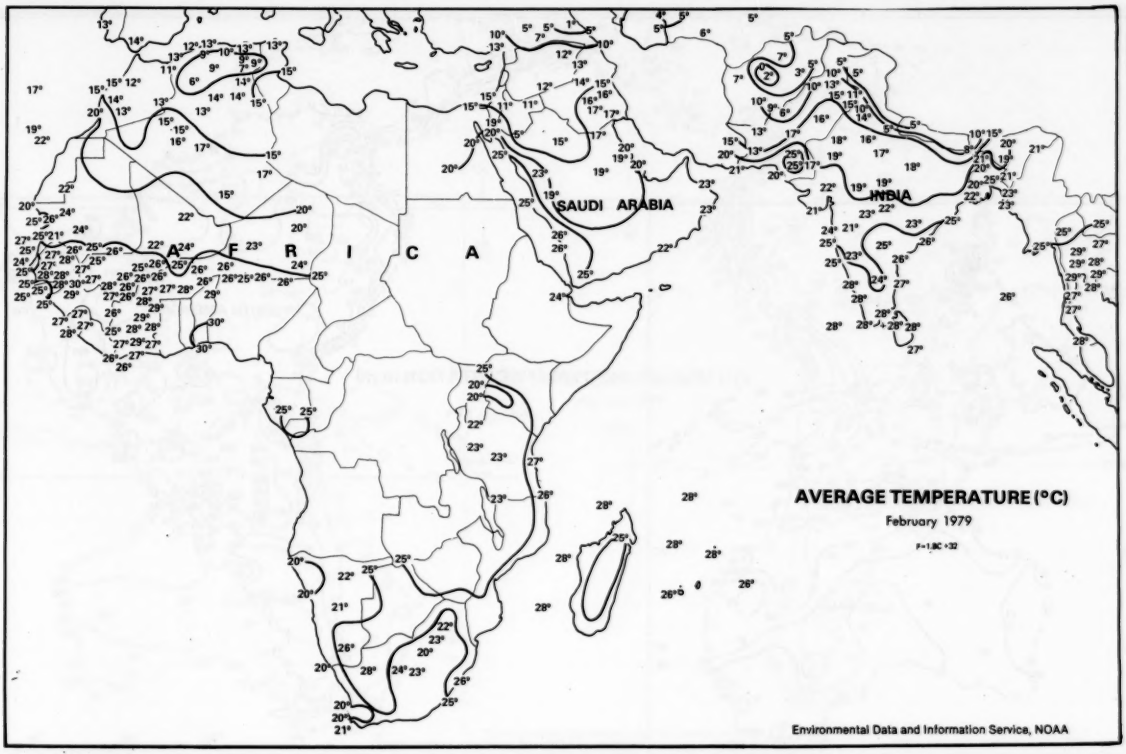
LIBYA
MOROCCO
SPAIN
FRANCE

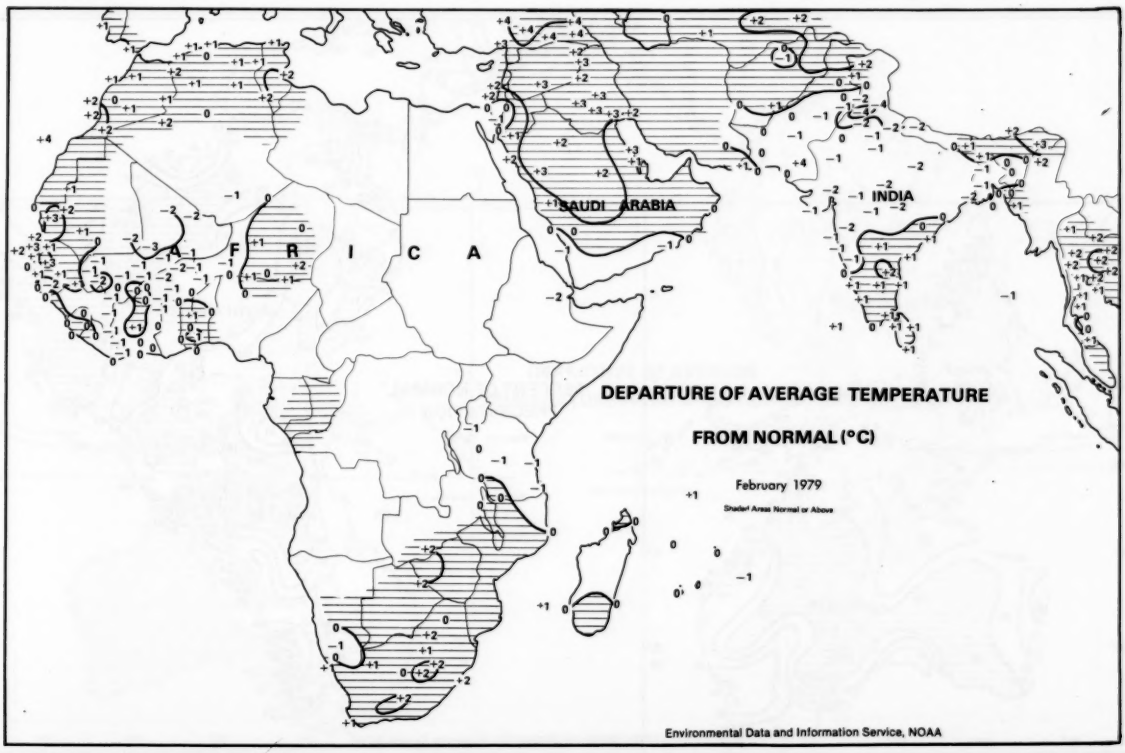

AVERAGE TEMPERATURE (° C)
February 1979
F=1.8C+32
Environmental Data and Information Service, NOAA
ATLANTIC OCEAN
NORWEGIAN SEA
BARENTS SEA
NORTH SEA
BALTIC SEA
BLACK SEA
MEDITERRANEAN SEA
U S S R
FRANCE
SPAIN
POLAND
UKRAINIAN S.S.R.
KAZAKH S.S.R.
TURKEY
IRAN
IRAQ
AFGHANISTAN
LIBYA
U.A.R.

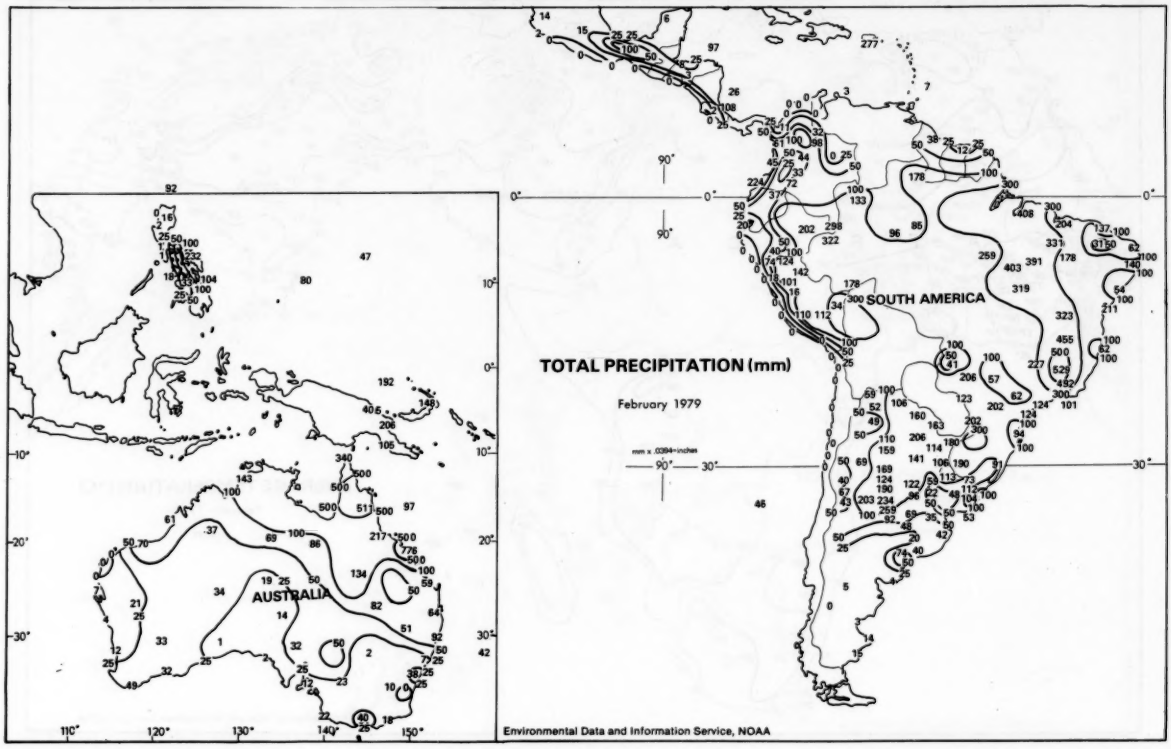

DEPARTURE OF AVERAGE
TEMPERATURE FROM NORMAL (°C)
February 1979
Shaded Areas Normal or Above
Environmental Data and Information Service, NOAA
ATLANTIC OCEAN
NORWEGIAN SEA
BARENTS SEA
NORTH SEA
BALTIC SEA
BLACK SEA
MEDITERRANEAN SEA
U S S R
FRANCE
SPAIN
POLAND
UKRAINIAN S.S.R.
KAZAKH S.S.R.
TURKEY
IRAN
IRAQ
AFGHANISTAN
LIBYA
U.A.R.

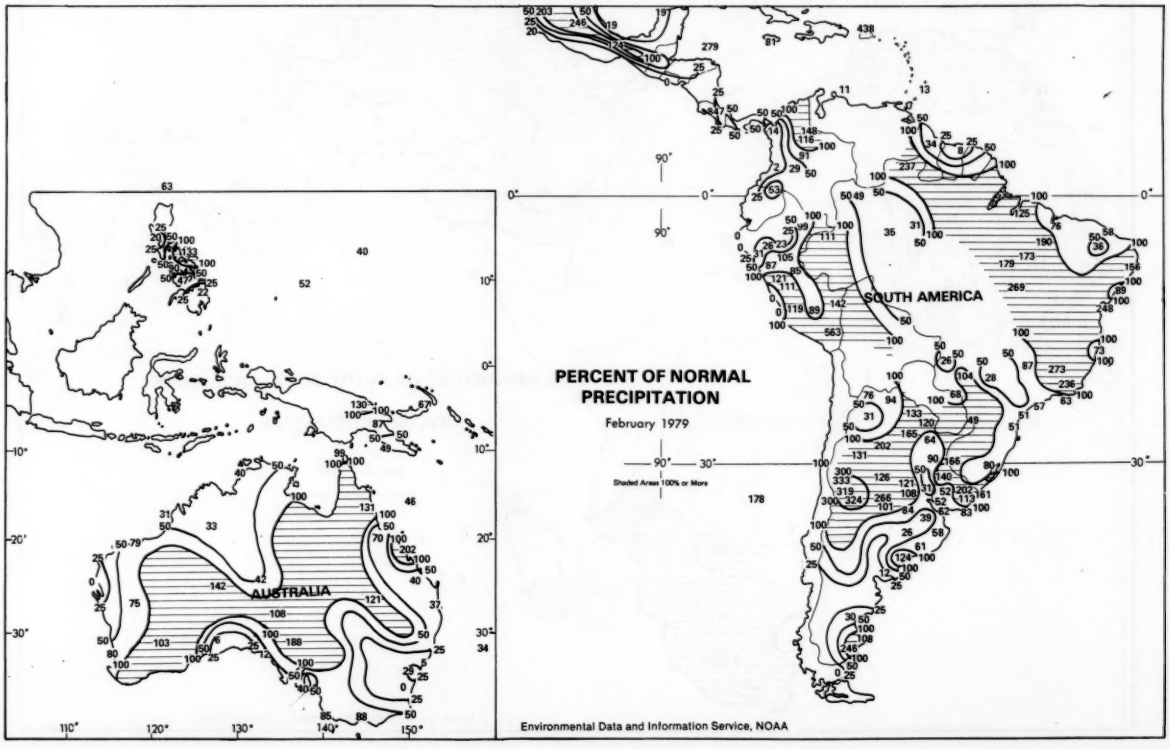

SAUDI ARABIA
INDIA
A F R I C A
TOTAL PRECIPITATION (mm)
February 1979
mm x .0394=inches
Environmental Data and Information Service, NOAA

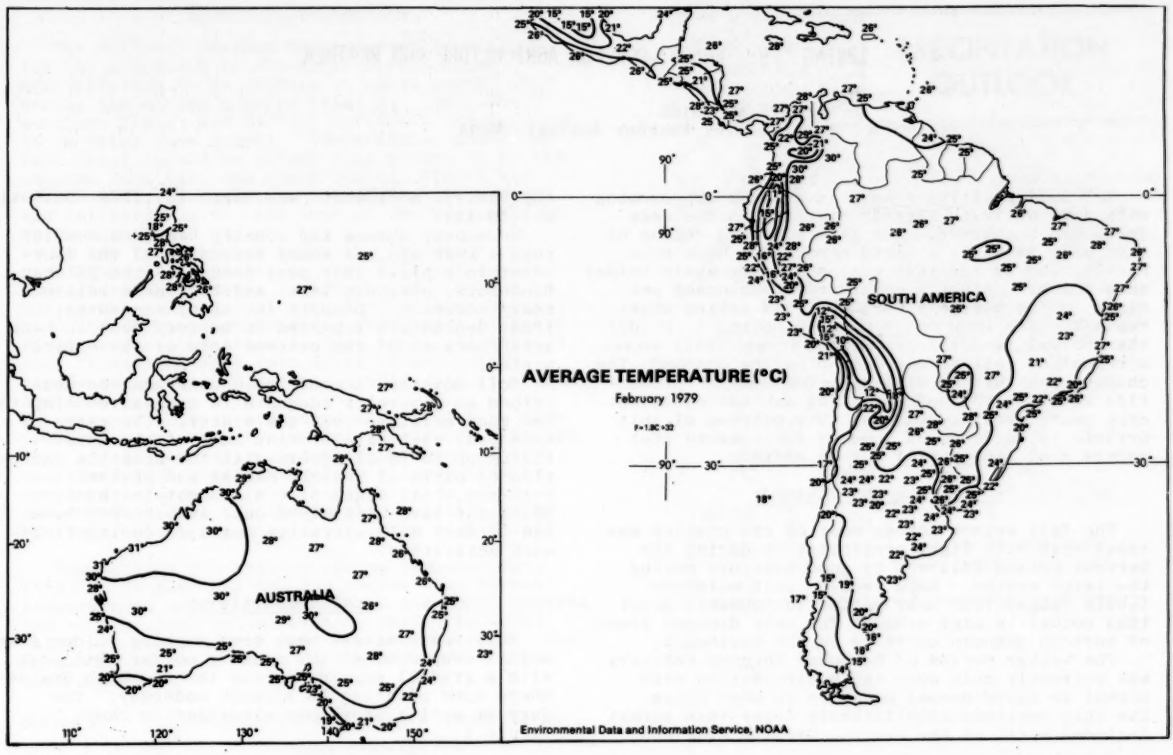

DASHED AREA RECEIVED NO PRECIPITATION, AND EXPECTS NONE
SAUDI ARABIA
INDIA
A F R I C A
PERCENT OF NORMAL PRECIPITATION
February 1979
Shaded Areas 100% or More
Environmental Data and Information Service, NOAA

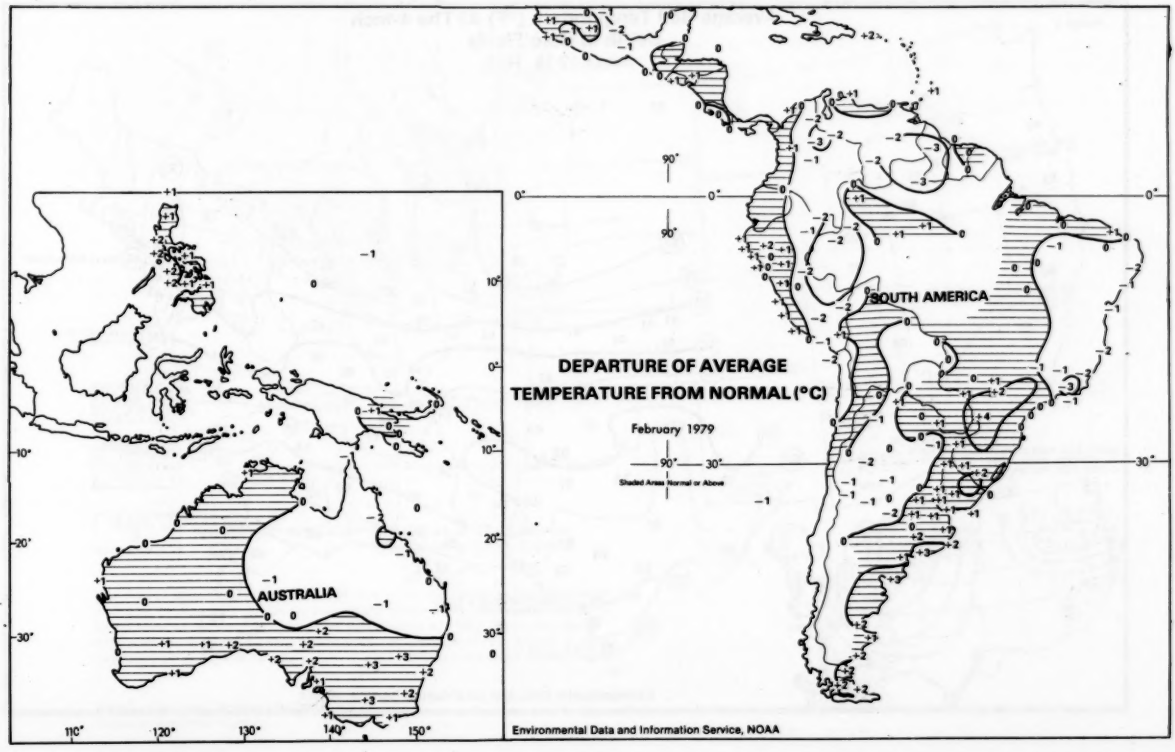

SAUDI ARABIA
INDIA
AFRICA
AVERAGE TEMPERATURE (°C)
February 1979
°F=1.8C +32
Environmental Data and Information Service, NOAA


SAUDI ARABIA
INDIA
AFRICA
DEPARTURE OF AVERAGE TEMPERATURE
FROM NORMAL (°C)
February 1979
Shaded Areas Normal or Above
Environmental Data and Information Service, NOAA


TOTAL PRECIPITATION (mm)
February 1979
mm x .0394=inches
SOUTH AMERICA
AUSTRALIA
Environmental Data and Information Service, NOAA


PERCENT OF NORMAL PRECIPITATION
February 1979
Shaded Areas 100% or More
SOUTH AMERICA
AUSTRALIA
Environmental Data and Information Service, NOAA


AVERAGE TEMPERATURE (°C)
February 1979
F=1.8C+32
SOUTH AMERICA
AUSTRALIA
Environmental Data and Information Service, NOAA


DEPARTURE OF AVERAGE
TEMPERATURE FROM NORMAL (°C)
February 1979
Shaded Areas Normal or Above
SOUTH AMERICA
AUSTRALIA
Environmental Data and Information Service, NOAA

# SPRING '79: AN OUTLOOK FOR AGRICULTURE AND WEATHER

by Richard E. Felch
Agricultural Weather Analyst, USDA

The 1979 planting season is rapidly approaching with some activity already starting in the Deep South and Southwest. The late planting season of last year is still a vivid memory for many producers, and so far this year soils are again colder than normal. Also, a considerable snowpack persists in the northern Corn Belt and spring wheat regions. The long range outlook points to colder than normal temperatures in many areas. Will we see a repeat of last year's late planting season? The chances are that we will not. What about production levels? The potential for another excellent crop year certainly exists. The purpose of this article is to focus on some of the reasons that delays most likely will not be extreme.

## Setting the Stage

The fall season across most of the country was ideal with only light precipitation during the harvest period followed by good moisture during the later months. As a result, soil moisture levels ranged from near normal to somewhat drier than normal in many areas. The only drought areas of serious concern centered in the Southeast.

The winter period of December through February was extremely cold over the entire Nation with normal to above-normal moisture in most areas. The only sections significantly drier than normal included parts of the central Great Plains and the Pacific Northwest (see March 13, 1979, Bulletin, pp. 10-11).

Snowcover across the country has been heavier than a year ago. A sharp recession of the snowcover took place this past week, but the Dakotas, Minnesota, northern Iowa, and Wisconsin retain a heavy snowpack. Despite the heavy snowcover, frost depths are reported to be very deep in many areas because of the extreme cold of the entire winter.

Soil moisture across the country may be described as generally adequate to excessive owing to the good moisture over the winter. The rains of this past week have brought much of the Great Plains up to ideal levels with the possible exception of parts of western Kansas and eastern Colorado. All signs of the drought in the Southeast have been wiped out, and growers have had to deal with excessive moisture during fieldwork activities.

## Soil Temperatures

Soil temperatures have been running colder than normal over most of the country so far this year with a gradual warming across the southern States where some planting is already underway. The current soil temperature situation is shown in figure 1.

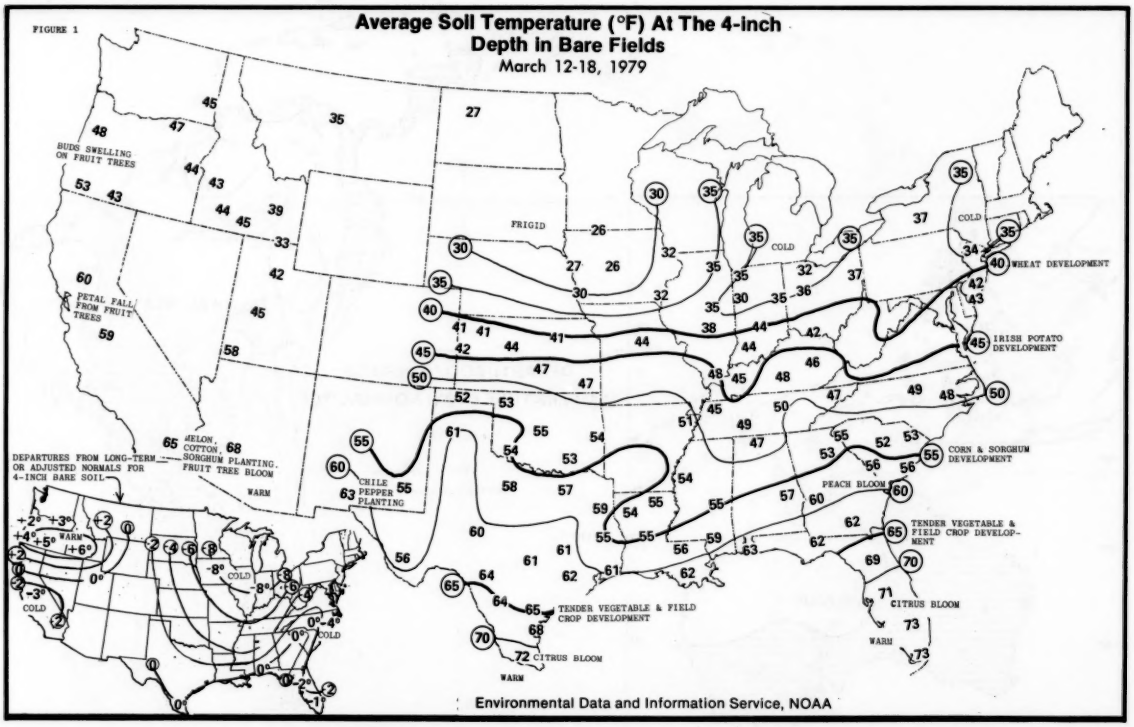


FIGURE 1
Average Soil Temperature (°F) At The 4-inch Depth In Bare Fields
March 12-18, 1979
BUDS SWELLING ON FRUIT TREES
PETAL FALL FROM FRUIT TREES
MELON, COTTON, SORGHUM PLANTING. FRUIT TREE BLOOM
CHILE PEPPER PLANTING
FRIGID
COLD
WARM
WHEAT DEVELOPMENT
IRISH POTATO DEVELOPMENT
CORN & SORGHUM DEVELOPMENT
PEACH BLOOM
TENDER VEGETABLE & FIELD CROP DEVELOPMENT
CITRUS BLOOM
DEPARTURES FROM LONG-TERM OR ADJUSTED NORMALS FOR 4-INCH BARE SOIL
Environmental Data and Information Service, NOAA

## Forecast Information

The National Weather Service monthly outlook for the mid-March to mid-April period shows precipitation to be average to above normal over nearly the entire country (fig. 2). Only the southern Plains and Pacific Northwest are expected to be drier than normal. Temperatures along the East Coast should be warmer than normal while the eastern Corn Belt and south-central States are near normal. The western Corn Belt, the central and northern Plains, and much of the West will be below normal.

If the forecast verifies, the producers of many crops will experience some difficulties in completing their early fieldwork and planting. Spring wheat areas of the northern Plains still have an extensive snowcover. The threat of heavy flooding due to melting is very real. It appears that it will be well into April before active fieldwork begins. Planting normally starts around Arpil 10.

Corn and soybean producers also will have some problems completing their early fieldwork although they are in generally good shape because of the excellent fall conditions which allowed them to complete a large share of their plowing. The eastern Corn Belt is also running a little later, but the impacts are not likely to be significant.

The outlook for average spring temperatures, (fig. 3) is also calling for cooler than normal temperatures over a broad area of the south-central and southwestern United States, while the Great Lakes and eastern Corn Belt are above normal. The remainder of the country is considered indeterminate.

Figure 2.

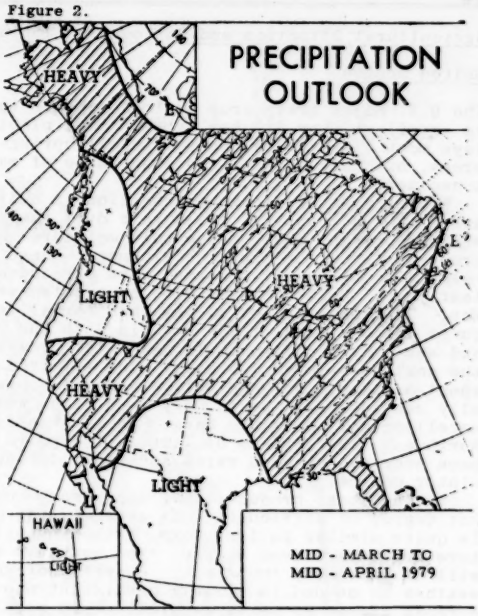
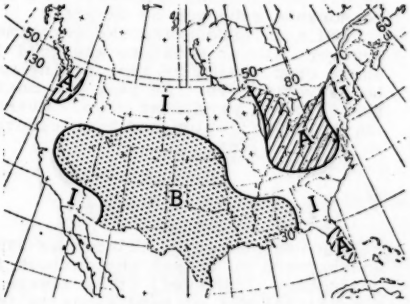



**Figure 3. OUTLOOK FOR SPRING AVERAGE TEMPERATURES**

**March through May 1979**




A — Above Normal, 60% chance of occurrence

B — Below Normal, 60% chance of occurrence

I — Indeterminate, 50% chance of Above Normal
50% chance of Below Normal

The two categories Above and Below are to be compared to the long-term average or "normal" temperatures of the years 1941-70. Each category has a natural climatic frequency or probability of 50%. Each carries a 60% probability of occurring where forecast (shaded area), based on the verification scores of twenty years of experimental seasonal predictions.

NCAA, National Weather Service
Climate Analysis Center

February 26, 1979

## Agricultural Situation and Outlook: A World View

### United States

The U.S. major grain crop outlook appears to be good to excellent over all key areas. Some planting delays most likely will occur with all spring-sown crops, but they are not expected to be of major consequence.

Winter wheat is in good condition is nearly all areas of the country. A key rain over the past weekend brought most of the soil moisture that the crop will need for early development; there is already a good subsoil moisture base carried over from last year. Moisture should be no problem well into May. The tendency for colder than normal temperatures through much of the area in both the 30-day and seasonal forecast could mean slow growth during the early development stages. The soft red winter wheat areas of the Corn Belt States also are generally considered to be in very good shape with an excellent soil moisture base. In the Pacific Northwest, the dryness of last fall appears to have been overcome by good rains and snows during the winter months.

Spring wheat producers may experience the greatest degree of difficulty. In general, the situation is quite similar to last year, although soil moisture levels are even higher. The next two weeks will be extremely important. A period of moderate weather is needed to allow a persistent snowmelt. A rapid change or heavy rainfall could result in severe flooding. The potential does exist for serious flooding, however. Planting is normally underway by mid-April, although last year they had not started. Once the crop is in the ground they will benefit from excellent soil moisture.

Corn and soybean producers will likely run late, particularly early in the season. The fieldwork situation is generally good because of the open fall of 1978. However, snow still covers northern Iowa, Minnesota, and Wisconsin. Soils elsewhere in the Corn Belt remain colder than normal and generally quite wet. Field conditions should improve once the frost leaves the ground in the western Corn Belt. In general, the eastern Corn Belt is ahead of the western Corn Belt. Although it is sometimes dangerous to generalize, it is anticipated that early corn planting will be delayed by about two weeks if the wet forecast for the next 30 days holds up. However, the planting will finish only a few days later than normal as farmers push to catch up. Producers demonstrated again last year that they can put their entire crop in the ground in about 10 days if necessary. Soybean planting may also be delayed, but slowdowns will be generally minor, particularly with respect to potential impacts on production. The key to this year's prospects is the fact that soil moisture levels will be nearly topped out in most areas at the beginning of the planting season. Early development should be excellent.

Cotton and rice producers may also experience some delays, although soil temperatures have warmed markedly during the past two weeks. Soils are generally very wet and field conditions will likely pose a bigger factor than temperature.

### International Situation

Most of the northern hemisphere came through the winter season in good condition, though it is not possible to look at each situation in depth here.

Canadian spring wheat producers may expect some significant delays in planting because of the combination of a cold, wet winter and very little fieldwork completed last fall because of constant rains. However, they will have an excellent soil moisture base for the crop.

The situation in Europe is mixed because of the flip-flop weather. Most winter grains were seeded under very dry conditions. The winter has been wet and very cold. Higher than normal winter losses may be expected, but this will be compensated for in part by spring seedings.

The Soviet Union has had a very cold winter, but winter wheat generally maintained a reasonable snowcover for protection. The southern half of the Ukraine has been free of snow for the past month, but temperatures have remained moderate. Winter grains are just breaking dormancy along the Black Sea, particularly in Krasnodar Kray where it has been very warm. Winterkill is this area was heavier than normal. However, overall winterkill has approached normal.

In China, there was considerable concern over dryness in the winter wheat-producing areas. It appears that winter moisture came close to normal, thanks in large measure to heavy rains in October. Temperatures have been running above normal for some time, and fields in the southern half of the area are growing actively. The general water supply picture has improved, and it appears that a reasonable crop may be expected.

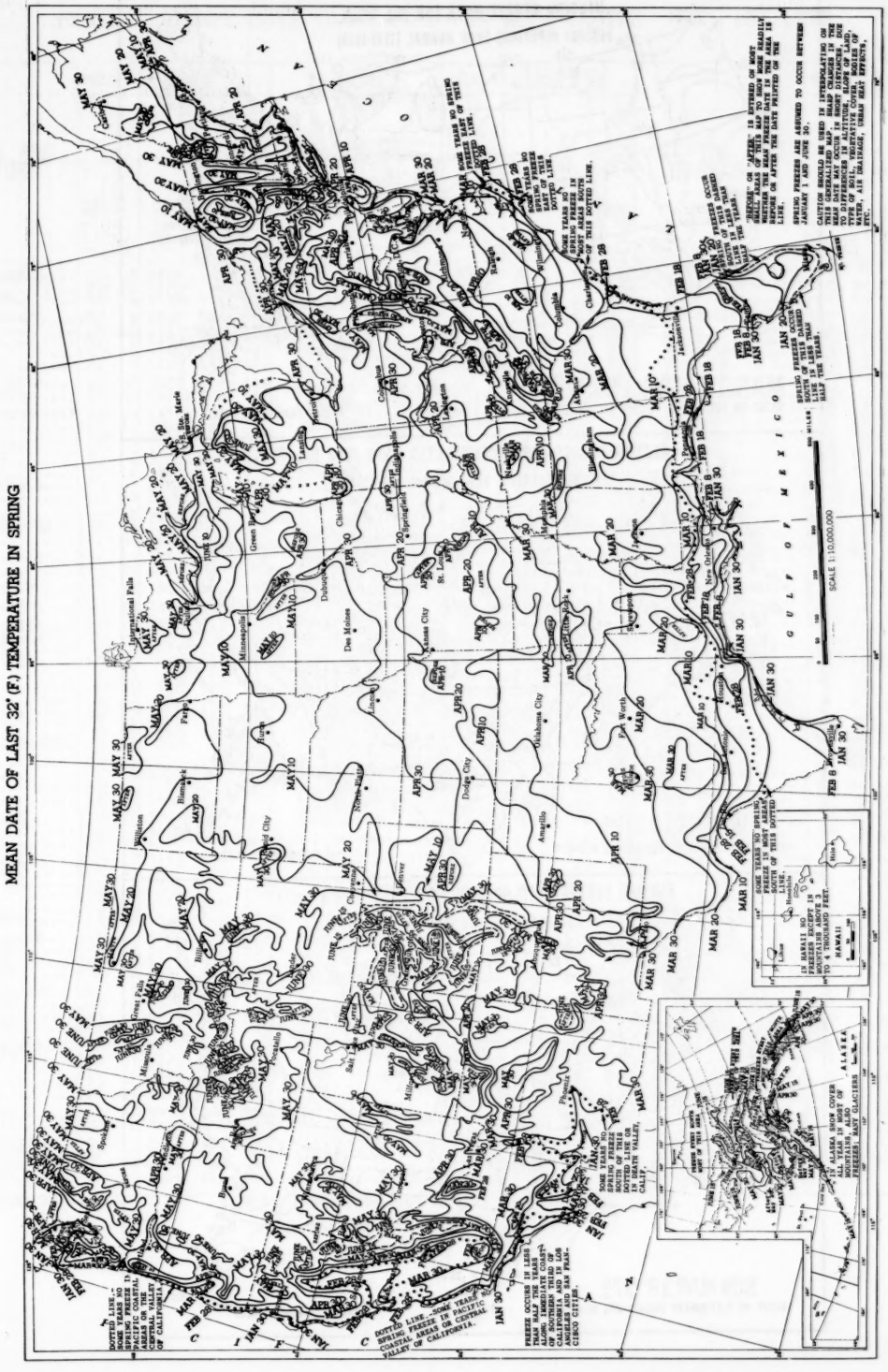
India is undergoing the dry time of the year. However, winter moisture was good for the winter wheat crop, which is approaching maturity and will be harvested over the next two months with prospects for an excellent crop. Overall water supplies for both irrigation and hydroelectric power appear to be excellent.

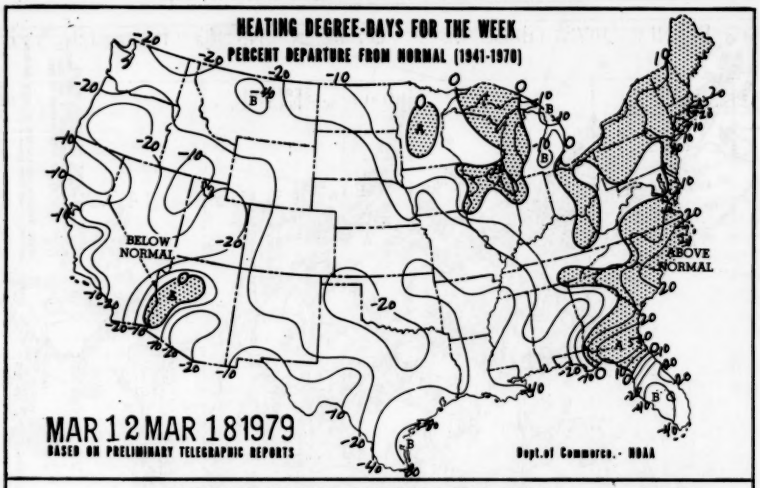
### Summary

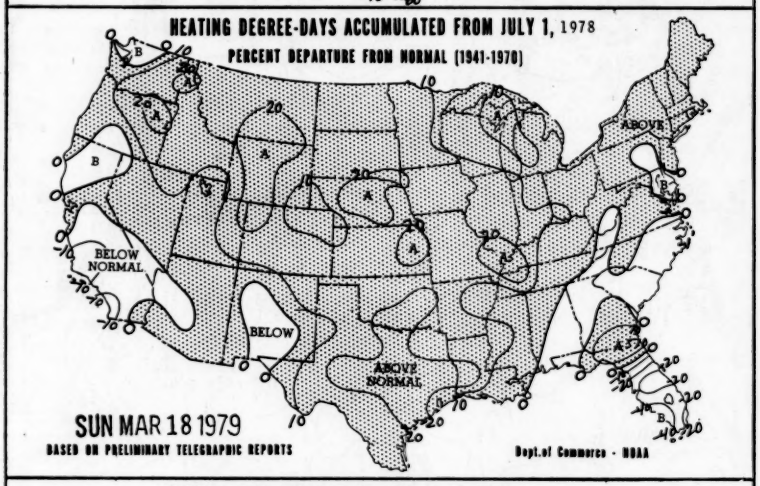
A great number of things can happen between now and harvest to change the outlook for agricultural production. However, it is always reassuring when the initial set of conditions is favorable. This increases the odds for a good crop year, and the situation is certainly stacked in that direction---for the moment at least.

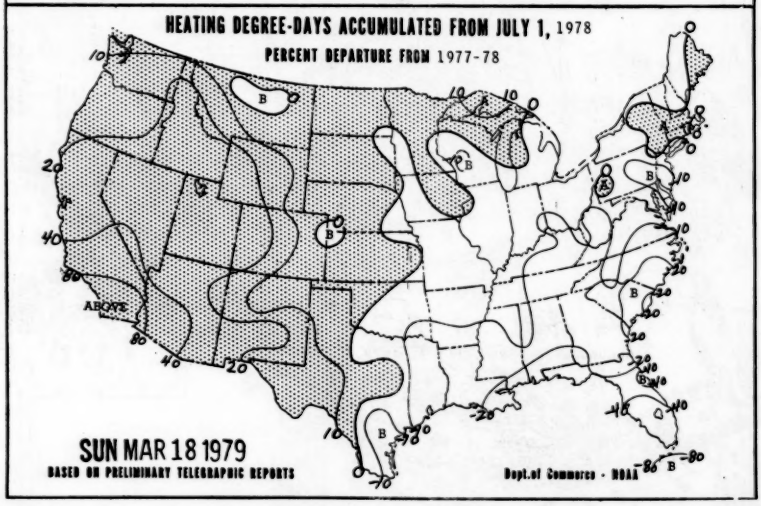
Corrections for February Monthly Table
March 6, 1979, Vol. 66, No. 10, page 12.

Fairbanks---tot. prec. T, depart. -.5
Kodiak---temp. 27, depart. -4; tot. prec. 1.5, depart. -3.4
Nome---temp. -1, depart. -5


MEAN DATE OF LAST 32° (F.) TEMPERATURE IN SPRING
GULF OF MEXICO
SCALE 1:10,000,000
DOTTED LINE - SPRING FREEZE IN PACIFIC COASTAL AREAS OR CENTRAL VALLEY OF CALIFORNIA.
DOTTED LINE - SOME YEARS NO SPRING FREEZE IN PACIFIC COASTAL AREAS OR CENTRAL VALLEY OF CALIFORNIA.
FREEZE OCCURS IN LESS THAN 10 YEARS ALONG IMMEDIATE COASTAL AREAS OF SOUTHERN CALIFORNIA AND IN LOS ANGELES AND SAN FRANCISCO CITIES.
SOME YEARS NO SPRING FREEZE SOUTH OF THIS DOTTED LINE.
SOME YEARS NO SPRING FREEZE EAST OF THIS DOTTED LINE.
SOME YEARS NO SPRING FREEZE IN MOST AREAS SOUTH OF THIS DOTTED LINE.
SPRING FREEZES OCCUR IN LESS THAN 10 YEARS SOUTH OF THIS DOTTED LINE.
SOME YEARS NO SPRING FREEZE IN MOST AREAS SOUTH OF THIS DOTTED LINE.
IN HAWAII NO FROST IS REPORTED ABOVE 2 MOUNTAINS ABOVE 2 THOUSAND FEET.
IN ALASKA SNOW COVER IS USUALLY PRESENT ON MOUNTAINS, ALSO FREEZES, MANY GLACIERS
SPRING FREEZES ARE ASSUMED TO OCCUR BETWEEN JANUARY 1 AND JUNE 30.
CAUTION SHOULD BE USED IN INTERPOLATING ON THIS CONTOURED MAP. SHARP CHANGES IN THE FREEZE DATE MAY OCCUR OVER SHORT DISTANCES DUE TO DIFFERENCES IN ALTITUDE, SLOPE OF LAND, EXPOSURE TO AIR DRAINAGE, NEARNESS TO BODIES OF WATER, AIR DRAINAGE, URBAN HEAT EFFECTS, ETC.


HEATING DEGREE-DAYS FOR THE WEEK
PERCENT DEPARTURE FROM NORMAL (1941-1970)
BELOW NORMAL
ABOVE NORMAL
MAR 12 MAR 18 1979
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept.of Commerce. - NOAA


HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1978
PERCENT DEPARTURE FROM NORMAL (1941-1970)
BELOW NORMAL
BELOW
ABOVE NORMAL
ABOVE
SUN MAR 18 1979
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept.of Commerce - NOAA


HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1978
PERCENT DEPARTURE FROM 1977-78
ABOVE
SUN MAR 18 1979
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept.of Commerce - NOAA

# HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING MAR. 18. 1979.

| STATES AND STATIONS | WEEKLY TOTAL | WEEKLY DEPARTURE* | SEASONAL ACCUMULATION + TOTAL | SEASONAL ACCUMULATION + DEPARTURE* | SEASONAL ACCUMULATION + DEPARTURE FROM 1977-78 |
|---|---|---|---|---|---|
| ALA. | | | | | |
| BIRMINGHAM | 77 | -15 | 2639 | -61 | -532 |
| MOBILE | 36 | -16 | 1571 | -4 | -575 |
| MONTGOMERY | 44 | -26 | 1904 | -183 | -423 |
| ARIZ. | | | | | |
| FLAGSTAFF | 227 | 8 | 5802 | 225 | 1142 |
| PHOENIX | 27 | -16 | 1331 | -101 | -641 |
| TUCSON | 50 | -7 | 1647 | -58 | -473 |
| WINSLOW | 136 | -8 | 4195 | 183 | 766 |
| YUMA | 21 | 0 | 1119 | 167 | 531 |
| ARK. | | | | | |
| FORT SMITH | 69 | -42 | 3623 | -596 | -156 |
| LITTLE ROCK | 65 | -46 | 3302 | -266 | -125 |
| CALIF. | | | | | |
| BAKERSFIELD | 38 | -23 | 1656 | -269 | -622 |
| EUREKA | 109 | 10 | 3486 | 160 | 557 |
| FRESNO | 58 | -1 | 2147 | -134 | -511 |
| LOS ANGELES | 57 | -6 | 1238 | -94 | -569 |
| RED BLUFF | 81 | -4 | 2076 | -184 | -362 |
| SAN DIEGO | 33 | -16 | 969 | -178 | -595 |
| SAN FRANCISCO | 74 | -10 | 2407 | -135 | -530 |
| STOCKTON | 63 | -25 | 2308 | -58 | -582 |
| COLO. | | | | | |
| DENVER | 148 | -52 | 5246 | -422 | -551 |
| GRAND JUNCTION | 142 | -28 | 5751 | -978 | -1446 |
| PUEBLO | 131 | -49 | 5183 | -661 | -492 |
| CONN. | | | | | |
| BRIDGEPORT | 201 | 8 | 4455 | -55 | -192 |
| HARTFORD | 234 | 24 | 5608 | -364 | -240 |
| DEL. | | | | | |
| WILMINGTON | 173 | 6 | 4313 | -146 | -543 |
| D.C. | | | | | |
| WASHINGTON | 129 | -13 | 3499 | -157 | -344 |
| FLA. | | | | | |
| APALACHICOLA | 39 | -1 | 1321 | -43 | -508 |
| DAYTONA BEACH | 21 | -7 | 620 | -227 | -520 |
| FORT MYERS | 4 | -6 | 234 | -213 | -428 |
| JACKSONVILLE | 57 | -16 | 1464 | -213 | -264 |
| KEY WEST | 0 | 0 | 39 | -27 | -182 |
| LAKELAND | 5 | -14 | 527 | -121 | -386 |
| MIAMI | 3 | -1 | 181 | -25 | -132 |
| ORLANDO | 17 | -4 | 567 | -128 | -249 |
| TALLAHASSEE | 54 | -10 | 1650 | -175 | -417 |
| TAMPA | 6 | -15 | 547 | -139 | -471 |
| WEST PALM BEACH | 5 | -2 | 237 | -62 | -204 |
| GA. | | | | | |
| ATLANTA | 78 | -26 | 2614 | -158 | -588 |
| AUGUSTA | 81 | 0 | 2323 | -11 | -410 |
| MACON | 69 | -1 | 2076 | -4 | -433 |
| SAVANNAH | 66 | -6 | 1687 | -120 | -508 |
| IDAHO. | | | | | |
| BOISE | 139 | -32 | 5345 | -627 | -1207 |
| LEWISTON | 121 | -37 | 5187 | -746 | -963 |
| POCATELLO | 189 | -22 | 6370 | -727 | -1471 |
| ILL. | | | | | |
| CAIRO | 101 | -27 | 4189 | -758 | -50 |
| CHICAGO | 223 | -21 | 5897 | -774 | -87 |
| MOLINE | 214 | -3 | 6411 | -933 | -76 |
| PEORIA | 194 | -5 | 5994 | -818 | -196 |
| ROCKFORD | 252 | -30 | 6450 | -720 | -280 |
| SPRINGFIELD | 173 | -12 | 5494 | -726 | -270 |
| IND. | | | | | |
| EVANSVILLE | 140 | -12 | 4546 | -509 | -392 |
| FORT WAYNE | 191 | -13 | 5603 | -428 | -530 |
| INDIANAPOLIS | 168 | -14 | 5171 | -432 | -543 |
| SOUTH BEND | 192 | -20 | 5577 | -239 | -365 |
| IOWA. | | | | | |
| BURLINGTON | 204 | -3 | 6210 | -980 | -79 |
| DES MOINES | 184 | -40 | 6306 | -623 | -19 |
| DUBUQUE | 254 | -19 | 6892 | -808 | -214 |
| SIOUX CITY | 216 | -13 | 7124 | -1226 | -377 |
| KANS. | | | | | |
| CONCORDIA | 142 | -45 | 5559 | -782 | -27 |
| DODGE CITY | 131 | -41 | 4936 | -641 | -175 |
| GOODLAND | 136 | -71 | 5357 | -335 | -146 |
| TOPEKA | 132 | -42 | 5462 | -948 | -122 |
| WICHITA | 111 | -45 | 4855 | -780 | -156 |
| KY. | | | | | |
| LEXINGTON | 151 | -5 | 4421 | -347 | -446 |
| LOUISVILLE | 142 | -12 | 4188 | -172 | -487 |
| LA. | | | | | |
| BATON ROUGE | 38 | -11 | 1692 | -118 | -334 |
| LAKE CHARLES | 28 | -19 | 1666 | -256 | -280 |
| NEW ORLEANS | 25 | -19 | 1403 | -24 | -453 |
| SHREVEPORT | 49 | -19 | 2324 | -322 | -524 |
| MAINE. | | | | | |
| CARIBOU | 332 | 39 | 7696 | 45 | 32 |
| PORTLAND | 272 | 37 | 6146 | -193 | -3 |
| MD. | | | | | |
| BALTIMORE | 158 | -1 | 4012 | -20 | -330 |
| MASS. | | | | | |
| BOSTON | 219 | 28 | 4756 | 183 | 129 |
| MICH. | | | | | |
| ALPENA | 246 | 31 | 6623 | 86 | 314 |
| DETROIT | 220 | 8 | 5748 | -462 | -296 |
| FLINT | 216 | 15 | 6040 | -316 | -165 |
| GRAND RAPIDS | 222 | 6 | 6154 | -589 | -30 |
| HOUGHTON LAKE | 255 | 19 | 7023 | -323 | -55 |
| LANSING | 205 | 25 | 6024 | -368 | -418 |
| MARQUETTE | 286 | 18 | 7308 | -783 | -684 |
| MUSKEGON | 244 | 13 | 6219 | -674 | -85 |
| S. STE. MARIE | 290 | 2 | 7721 | -512 | -72 |
| MINN. | | | | | |
| DULUTH | 283 | 13 | 8360 | -557 | -202 |
| INTERNATL FALLS | 312 | 5 | 9497 | -894 | -207 |
| MINNEAPOLIS | 262 | 2 | 7231 | -420 | -174 |
| ROCHESTER | 265 | 2 | 7908 | -1090 | -323 |
| ST. CLOUD | 287 | 9 | 8133 | -783 | -199 |
| MISS. | | | | | |
| JACKSON | 56 | -18 | 2346 | -227 | -436 |
| MERIDIAN | 59 | -14 | 2409 | -208 | -254 |
| MO. | | | | | |
| COLUMBIA | 123 | -47 | 4915 | -541 | -238 |
| KANSAS CITY | 127 | -48 | 5265 | -807 | -203 |
| ST. LOUIS | 131 | -29 | 4874 | -749 | -342 |
| SPRINGFIELD | 109 | -45 | 4649 | -691 | -139 |
| MONT. | | | | | |
| BILLINGS | 151 | -82 | 7021 | -1219 | -179 |
| GLASGOW | 245 | -41 | 8638 | -1290 | -35 |
| GREAT FALLS | 148 | -101 | 7134 | -1075 | -282 |
| HAVRE | 166 | -111 | 8094 | -962 | -225 |
| HELENA | 165 | -82 | 7396 | -884 | -733 |
| KALISPELL | 192 | -55 | 7639 | -876 | -733 |
| MILES CITY | 199 | -51 | 7694 | -1206 | -79 |
| MISSOULA | 172 | -55 | 7209 | -888 | -1004 |
| NEBR. | | | | | |
| GRAND ISLAND | 166 | -46 | 6529 | -1133 | -429 |
| LINCOLN | 172 | -34 | 6236 | -947 | -126 |
| NORFOLK | 195 | -37 | 6813 | -944 | -184 |
| NORTH PLATTE | 156 | -65 | 6809 | -1250 | -366 |
| OMAHA | 147 | -54 | 5808 | -631 | -240 |
| VALENTINE | 154 | -89 | 7038 | -1055 | -41 |
| NEV. | | | | | |
| ELY | 206 | -22 | 6411 | -412 | -1131 |
| LAS VEGAS | 54 | -21 | 2330 | -23 | -671 |
| RENO | 159 | -17 | 4945 | -246 | -922 |
| WINNEMUCCA | 150 | -45 | 5286 | -98 | -1036 |
| N.H. | | | | | |
| CONCORD | 265 | -34 | 6351 | -368 | -297 |
| N.J. | | | | | |
| ATLANTIC CITY | 185 | -15 | 4507 | -373 | -11 |
| TRENTON | 182 | -12 | 4258 | -99 | -343 |
| N. MEX. | | | | | |
| ALBUQUERQUE | 102 | -36 | 3589 | -145 | -173 |
| ROSWELL | 94 | -20 | 3294 | -27 | -598 |
| N.Y. | | | | | |
| ALBANY | 251 | -26 | 6021 | -322 | -163 |
| BINGHAMTON | 260 | -19 | 6077 | -186 | -266 |
| BUFFALO | 240 | -5 | 5793 | -234 | -119 |
| NEW YORK | 193 | -18 | 4346 | -257 | -192 |
| ROCHESTER | 244 | -16 | 5695 | -242 | -99 |
| SYRACUSE | 249 | -21 | 5794 | -359 | -26 |
| N.C. | | | | | |
| ASHEVILLE | 133 | -4 | 3518 | -114 | -567 |
| CHARLOTTE | 107 | -1 | 2630 | -47 | -342 |
| GREENSBORO | 141 | -14 | 3474 | -99 | -536 |
| HATTERAS | 135 | -28 | 2198 | -135 | -464 |
| RALEIGH | 123 | -6 | 2990 | -124 | -674 |
| WILMINGTON | 115 | -32 | 2090 | -122 | -604 |
| N. DAK. | | | | | |
| BISMARCK | 252 | -33 | 8512 | -1046 | -266 |
| FARGO | 283 | -9 | 8713 | -1017 | -186 |
| WILLISTON | 257 | -32 | 8585 | -1047 | -93 |
| OHIO. | | | | | |
| AKRON-CANTON | 203 | -2 | 5421 | -288 | -364 |
| CINCINNATI | 161 | -6 | 4844 | -520 | -661 |
| CLEVELAND | 186 | -20 | 5080 | -365 | -505 |
| COLUMBUS | 187 | -3 | 5080 | -275 | -474 |
| DAYTON | 172 | -14 | 5123 | -367 | -461 |
| TOLEDO | 214 | -5 | 5779 | -495 | -495 |
| YOUNGSTOWN | 221 | 9 | 5485 | -214 | -318 |
| OKLA. | | | | | |
| OKLAHOMA CITY | 87 | -38 | 3838 | -544 | -38 |
| TULSA | 63 | -61 | 3891 | -598 | -97 |
| OREG. | | | | | |
| ASTORIA | 114 | -33 | 4129 | -260 | -445 |
| BURNS | 162 | -44 | 6291 | -661 | -991 |
| MEDFORD | 115 | -28 | 3962 | -67 | -590 |
| PENDLETON | 127 | -24 | 5280 | -1008 | -691 |
| PORTLAND | 95 | -42 | 4091 | -361 | -542 |
| SALEM | 113 | -27 | 4082 | -359 | -531 |
| PA. | | | | | |
| ALLENTOWN | 189 | -2 | 4880 | -23 | -288 |
| ERIE | 233 | -5 | 5665 | -210 | -303 |
| HARRISBURG | 167 | -5 | 4356 | -102 | -614 |
| PHILADELPHIA | 177 | -12 | 4205 | -89 | -540 |
| PITTSBURGH | 199 | -7 | 5368 | -412 | -32 |
| SCRANTON | 228 | -21 | 5618 | -408 | -7 |
| R.I. | | | | | |
| PROVIDENCE | 240 | -40 | 5109 | -289 | -52 |
| S.C. | | | | | |
| CHARLESTON | 84 | -13 | 1828 | -147 | -455 |
| COLUMBIA | 99 | -14 | 2243 | -143 | -771 |
| GREENVILLE | 107 | -2 | 2921 | -85 | -337 |
| S. DAK. | | | | | |
| ABERDEEN | 250 | -21 | 8133 | -965 | -40 |
| HURON | 222 | -35 | 7692 | -967 | -68 |
| RAPID CITY | 164 | -79 | 6803 | -945 | -92 |
| SIOUX FALLS | 243 | -8 | 7490 | -941 | -2 |
| TENN. | | | | | |
| CHATTANOOGA | 122 | -9 | 3134 | -10 | -465 |
| KNOXVILLE | 110 | -3 | 3282 | -189 | -419 |
| MEMPHIS | 63 | -44 | 3018 | -98 | -244 |
| NASHVILLE | 111 | -13 | 3559 | -263 | -500 |
| TEXAS. | | | | | |
| ABILENE | 62 | -21 | 2687 | -312 | -135 |
| AMARILLO | 124 | -16 | 4075 | -476 | -126 |
| AUSTIN | 36 | -17 | 2000 | -377 | -3 |
| BEAUMONT | 28 | -19 | 1569 | -148 | -188 |
| BROWNSVILLE | 5 | -16 | 727 | -100 | -89 |
| CORPUS CHRISTI | 1 | -27 | 1031 | -136 | -168 |
| DEL RIO | 34 | -4 | 1695 | -237 | -175 |
| EL PASO | 79 | -15 | 3265 | -15 | -374 |
| FORT WORTH | 69 | -13 | 2616 | -433 | -260 |
| GALVESTON | 22 | -13 | 1336 | -190 | -246 |
| HOUSTON | 24 | -21 | 1657 | -304 | -393 |
| LUBBOCK | 81 | -38 | 3327 | -181 | -52 |
| MIDLAND | 68 | -13 | 2894 | -488 | -449 |
| SAN ANGELO | 61 | -6 | 2616 | -545 | -285 |
| SAN ANTONIO | 27 | -18 | 1679 | -200 | -187 |
| VICTORIA | 9 | -29 | 1480 | -316 | -98 |
| WACO | 53 | -13 | 2484 | -573 | -159 |
| WICHITA FALLS | 81 | -16 | 3245 | -604 | -79 |
| UTAH | | | | | |
| SALT LAKE CITY | 137 | -44 | 4950 | -65 | -1118 |
| VT. | | | | | |
| BURLINGTON | 273 | -17 | 6757 | -348 | -34 |
| VA. | | | | | |
| LYNCHBURG | 144 | -4 | 3889 | -214 | -353 |
| NORFOLK | 144 | -20 | 3059 | -37 | -280 |
| RICHMOND | 141 | -8 | 3508 | -57 | -352 |
| ROANOKE | 149 | -7 | 4003 | -298 | -364 |
| WASH. | | | | | |
| QUILLAYUTE | 117 | -44 | 4502 | -151 | -259 |
| SEATTLE-TACOMA | 102 | -45 | 3848 | -107 | -301 |
| SPOKANE | 156 | -40 | 6566 | -1101 | -969 |
| WALLA WALLA | 106 | -32 | 4578 | -567 | -559 |
| YAKIMA | 128 | -37 | 5629 | -696 | -867 |
| W. VA. | | | | | |
| BECKLEY | 172 | -5 | 4576 | -88 | -662 |
| CHARLESTON | 147 | -2 | 4142 | -188 | -540 |
| HUNTINGTON | 155 | -5 | 4262 | -286 | -352 |
| PARKERSBURG | 174 | -15 | 4373 | -248 | -546 |
| WIS. | | | | | |
| GREEN BAY | 263 | -3 | 7258 | -642 | -100 |
| LACROSSE | 213 | -30 | 6499 | -254 | -683 |
| MADISON | 243 | -6 | 6924 | -553 | -108 |
| MILWAUKEE | 240 | 0 | 6311 | -302 | -77 |
| WYO. | | | | | |
| CASPER | 185 | -59 | 6966 | -1024 | -796 |
| CHEYENNE | 173 | -68 | 5993 | -366 | -1194 |
| LANDER | 208 | -52 | 7696 | -1425 | -1502 |
| SHERIDAN | 190 | -54 | 7484 | -1367 | -496 |

BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1. 1978.

Agricultural Weather Facility
USDA South Bldg., Room 1248
Washington, DC 20250

IMMEDIATE – U. S. Weather Report

This Report Will be Treated in All Respects as Letter Mail

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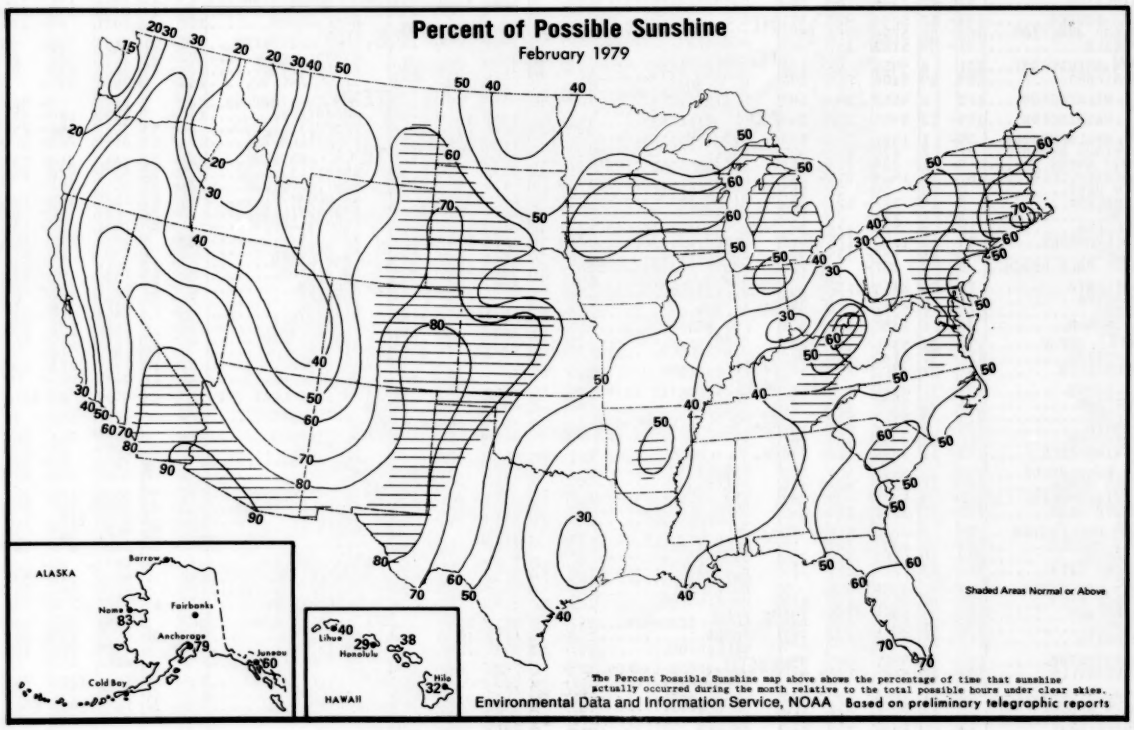
# FIRST CLASS MAIL